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ABSTRACT

"The Condition of Education, 2000" is an indicator report, summarizing the health of education, monitoring important developments, and showing trends in major aspects of education. Indicators examine relationships; show changes over time; compare or contrast subpopulations, regions, or countries; or assess characteristics of students from different backgrounds and types of schools. An indicator is policy relevant and problem oriented; it typically incorporates a standard against which to judge progress or regression. Each year about 60 indicators are selected that represent a consensus of professional judgment about significant national measures of the condition and progress of education at this time. The report leads with an essay on the knowledge, skills, and behaviors that entering kindergartners bring to school. The essay summarizes the initial results of a national, longitudinal study that is tracking the progress of these kindergartners through the elementary grades. Data from the study suggest the range of development that kindergarten teachers work with and that subsequent schooling needs to address. The indicators that follow the essay are in six sections: (1) Participation in Education; (2) Learner Outcomes; (3) Student Effort and Educational Progress; (4) the Quality of Elementary and Secondary Educational Environments; (5) Context of Postsecondary Education; and (6)

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Societal Support for Learning. The report includes the text, tables, and charts for each indicator plus the technical supporting data, supplemental information, and data sources. Appendices comprise over half of the publication and contain supplemental tables and notes, estimates of standard errors for the statistics, data sources, a glossary, and a bibliography that includes publications and surveys of the National Center for Education Statistics (NCES). (MLF)

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neat bee
nice mice
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NCES 2000-062

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# the condition of education 2000

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# Commissioner's Statement

*The Condition of Education, 2000* addresses the mission of the National Center for Education Statistics (NCES) to gather and publish information on the status and progress of education in the United States. The legislative authorization for these activities (with antecedents to 1867) states that the Center's purpose is to collect and report ". . . statistics and information showing the condition and progress of education in the United States and other nations in order to promote and accelerate the improvement of American education" (section 402(b) of the National Education Statistics Act of 1994). *The Condition of Education* responds to this mandate.

*The Condition of Education* is an indicator report, summarizing the health of education, monitoring important developments, and showing trends in major aspects of education. Indicators examine relationships; show changes over time; compare or contrast sub-populations, regions, or countries; or assess characteristics of students from different backgrounds and types of schools. An indicator is policy relevant and problem oriented; it typically incorporates a standard against which to judge progress or regression. Please remember, however, that indicators are not intended to identify causes or solutions, and cannot individually by themselves provide a completely comprehensive view of conditions in education.

**Organization of this report:** The 2000 edition of the report leads with an essay on the knowledge, skills, and behaviors that entering kindergartners bring to school. The essay summarizes the initial results of a national, longitudinal study that is tracking the progress of these kindergartners through the elementary grades. Data from the study suggest the range of development that kindergarten teachers work with and that subsequent schooling needs to address. I recommend that you read the essay; I believe you will find it to be interesting and highly informative.

The indicators that follow the essay are in six sections: (1) Participation in Education; (2) Learner Outcomes; (3) Student Effort and Educational Progress; (4) the Quality of Elementary and Secondary Educational Environments; (5) Context of Postsecondary Education; and (6) Societal Support for Learning. The first section describes the extent of enrollment in different levels of the education system among different population groups in the United States, from preprimary education to adult learning. The second section reports information about the outcomes of education in three domains: core academic subjects, social and cultural behaviors, and the economic outcomes of education for individuals. The third section takes a student perspective. It traces the progress that different groups of students have made from one level of the education system to the next and shows their eventual educational attainments. Some information about factors affecting these transitions is included. The fourth section examines different factors related to the quality of learning in elementary and secondary schools, such as courses taken, teacher characteristics, and how resources are used within institutions. The fifth section does the same but for postsecondary education. The sixth section reminds us that learning occurs in social contexts outside the boundaries of formal education as well as within them, but that formal schooling depends for its success upon financial support and other kinds of more direct involvement.

Supplemental tables and notes that support the indicators follow the six sections.

**Indicator selection:** Each year about 60 indicators are presented in The *Condition.* These indicators represent a consensus of professional

## Commissioner's Statement

**Continued**

judgment about significant national measures of the condition and progress of education at this time. Many of the indicators reflect a basic core that can be repeated with updated information on a recurring basis; other indicators are based on infrequent or special studies. Although other issues may be of interest and concern to you, the lack of current and valid information occasionally prevents us from examining all issues that deserve attention.

The indicators were developed using data collected by the NCES, as well as from surveys conducted by other organizations, both within and outside the federal government. Thirty-five of the indicators in The *Condition* are new this year. New to The *Condition* this year are groups of indicators presenting a composite picture of a complex educational process or set of relationships. For example, three indicators examine the effects of academic preparedness and other factors on the likelihood that high school students who are at some risk of not enrolling in higher education do so. Three other new indicators show new data from a recent study of student transcripts on the increases that have occurred since 1982 in the amount of advanced mathematics and science coursework taken by high school graduates. A related indicator translates data from the Video Tape Study of the Third International Mathematics and Science Study into an analysis showing how the quality of the mathematical content in 8th grade classrooms in the United States compares to two other industrialized countries. Three related indicators show change over time in student performance in mathematics and comparisons of student performance in mathematics with other countries, including student performance in advanced mathematics. A new indicator on student performance shows the civics understanding of students at the elementary, middle, and high school levels. Three new indicators examine issues of the persistence of students toward degrees in higher education and their rates of completion. Three other indicators on before and after school care; parents' satisfaction with their children's schools, teachers, academic standards, and discipline; and adult learning are based on recent data from the National Household Education Survey. One new indicator on higher education finance explores the costs of undergraduate education, while three new indicators on elementary and secondary education compare the expenditures of local school districts, shifts over time in their sources of revenues, and change over time in the proportion of the disparities in instructional expenditures per student among school districts.

**Availability of NCES data and information:** My colleagues and I strive to make our products available in several ways and in language that is appropriate to your needs. For this reason all new and most recent NCES publications and many data sets are available on-line through the NCES Internet site at http://nces.ed.gov. I hope you find this a useful way to read *The Condition of Education.*

With the release of the 2000 edition, there will be one *Condition of Education* on the web site rather than separate versions for different years as in the past. We intend to update indicators published on the web site semiannually as new data become available. Once a year a number of new indicators will be added to the existing collection as new data become available or as new indicators addressing educational issues not previously addressed, but using already available data, are developed. Over time this collection of indicators will grow to provide a broader and more complete view of *The Condition of Education* than is possible with the print publication alone. We will continue to publish the annual print publication for the time being. It will contain selected indicators from the web site.

## Commissioner's Statement

**Continued**

In addition, *The Condition of Education* can be obtained free of charge from ED Pubs, as long as copies last. To contact ED Pubs, call their toll-free telephone number: 1-877-4ED-PUBS (877-433-7827), TTY/TDD: 877-576-7734, e-mail them at EDPubOrders@aspensys.com, or send them a written request at ED Pubs, P.O. Box 1398, Jessup, MD 20794-1398.

I hope you will find the material in *The Condition of Education, 2000* to be useful and informative. Equally important, I invite you to send us suggestions about how we can improve future editions and continue to serve your needs well.

Gary W. Phillips

Gary W. Phillips

Acting Commissioner of Education Statistics

# Reader's Guide

As previous readers of *The Condition of Education* will note, much has changed in this year's volume. The number of indicators is somewhat larger and the discussion in each indicator has increased, but most are shorter than in the past. Some indicators are new; others provide new analyses and data to update indicators included in previous volumes of *The Condition of Education*. All indicators use the most recent national data available from the National Center for Education Statistics (NCES) or other sources.

In an effort to increase the utility and accessibility of the *Condition*, several changes have been made in the organization and style of the volume. The indicators are organized into six substantive sections assessing particular dimensions of the condition of education.

Each section begins with an overview essay that summarizes the key points in the indicators to follow. Most indicators contain a discussion and a single graph or table. The icon to the side of the graph or table directs readers to supplemental notes, supplemental tables, or to another source for more information. When the source is an NCES publication, such as NCES 2000–021, that publication can be viewed at the Center's web site (nces.ed.gov).

Supplemental notes provide information on the sources of data used, how an analysis was conducted or provide explanations of categories used in an indicator. For example, *Supplemental Note 3* summarizes the categories used for race-ethnicity and explains how the Consumer Price Index (CPI) is used to compute dollar amounts that can be compared over time.

Supplemental tables provide more detailed breakouts for an indicator, such as household income, race-ethnicity, or parents' highest education level. Tables of standard errors (see below) are also included for most indicators. A glossary of terms and a comprehensive bibliography of items cited in the *Condition* conclude the volume.

## DATA SOURCES

Data reported in this volume are primarily from two types of sources. Several indicators report data from entire populations, such as *Indicators 55* (faculty salaries) and *37* (bachelor's degrees earned by women). With this kind of data, information is collected from every member of the population surveyed. This "universe" could be all colleges and universities in the country, every school district, or all secondary school teachers.

When such data on the entire population are available, comparisons among different groups within that population can be made with a high degree of confidence. As an illustration, if information about the number of bachelor's degrees awarded is collected from all U.S. colleges and universities, then comparison of the number of degrees awarded to females and males is straightforward. Assuming that institutions have counted and reported the numbers of their graduates accurately, there is no doubt about the true or actual number of bachelor's degrees awarded to males and females.

A universe survey is typically expensive and time consuming, so researchers often collect data from a small sample of the population of interest. Through random sampling and other methods, researchers seek to ensure that this sample accurately represents the larger population to which they wish to generalize. NCES's National Education Longitudinal Study, for example, surveyed a representative sample of nearly 25,000 8th-graders from among all 8th-graders across the country. Based on this sample, conclusions can be drawn about all 8th-graders, such as their family background, characteristics of the schools they attend, their mathematical achievement (as measured with

# Reader's Guide

**Continued**

a test administered as part of the survey), and their activities outside of school (NCES 90–458).

Most indicators in *The Condition of Education* summarize data from sample surveys conducted by the NCES or the Bureau of the Census with support from NCES. Detailed explanations of NCES surveys can be obtained at the web site noted above, under "Survey and Program Areas." Information about the Current Population Survey, another frequent source of survey data used in *The Condition of Education*, can be obtained at http://www.bls.census.gov/cps/cpsmain.htm (and also in *Supplemental Note 1*).

### DATA ANALYSIS AND INTERPRETATION

Once data from a census or a sample survey are collected, it is necessary to summarize them in a meaningful way. Estimation of the true population average, or mean, is a common way of summarizing data. The mean is obtained by adding together the values for all members of the sample population and dividing by the sample size. An example of this is the annual mean salaries of professors at private, 4-year universities. A second kind of estimate is the median, which is simply the "middle" value among all members of the population. Half of all values in the population are above the median, and half are below. The percentage of the population having a certain characteristic, such as the percentage of graduates who are female, provides still another kind of estimate.

Analysis of data from a sample of a population requires consideration of several factors before the analysis becomes meaningful. For example, however conscientious an organization may be in collecting data from a sample of a population, there will always be some margin of error in estimating the population mean, median, or any other such statistic from the data. Consequently, data from samples can provide only an estimate of the true or actual value. The margin of error or the range of the estimate depends on several factors, such as the amount of variation in the responses, the size and representativeness of the sample, and the size of the subgroup for which the estimate is computed.[1]

When data from samples are reported, as is the case with most of the indicators in *The Condition of Education*, the magnitude of this margin of error is measured by what statisticians call the "standard error" of an estimate.[2] The standard errors for all the estimated means, medians, or percentages reported in the tables and graphs of *The Condition of Education* can be found in the Standard Errors section at the end of the volume.

As an illustration, *Indicator 13* reports the average reading scores of various racial-ethnic groups in the 1998 National Assessment of Educational Progress. The mean scores for 12th-graders for two groups—Hispanics and American Indians/Alaskan Natives—were 275 and 276, respectively. In contrast, the standard errors were considerably different: 0.7 for Hispanic students and 5.4 for the American Indians/Alaskan Natives.

The mean score with the smaller standard error provides a more reliable estimate of the true value than does the mean score with a higher standard error. Standard errors tend to diminish in size as the size of the sample (or subsample) increases. Consequently, for the same kinds of data, such as enrollment rates in postsecondary education sample surveys (like the National Postsecondary Student Aid Study) or scores on the National Assessment of Educational Progress, standard errors will almost always be larger for American Indians/Alaskan Natives than for whites, blacks, and Hispanics, who represent much larger proportions of the population.

# Reader's Guide

**Continued**

When data from samples are reported, some caution is warranted in making comparisons. Although one mean or percentage may be larger than another, the difference may be due to the standrd errors of the estimates.

Whether differences in means or percentages are statistically significant can be determined using the standard errors of the estimates. When differences are statistically significant, the probability that the difference occurred by chance is usually small, occurring about 5 times out of 100. The method primarily used here for determining whether the difference between two means is statistically significant is described in the introduction to the standard error tables for all of the indicators in the back of the volume.

For all indicators in *The Condition of Education* based on samples, differences between means or percentages (including increases or decreases) are stated in the text only when they are statistically significant. To determine whether differences reported are statistically significant, two-tailed t-tests, at the .05 level, were used. Bonferroni adjustments are made when more than two groups are compared simultaneously (e.g., blacks, whites, and Hispanics). The formula for determining statistical significance is also adjusted when the samples being compared are dependent.

Discussion of two indicators illustrates the consequences of these considerations. *Indicator 59*, for example, notes that the percentage of students who had parents who attended a meeting with a teacher increased between 1996 (70.6 percent) and 1999 (72.2 percent). Although the increase of 1.6 percent is relatively small, as are the standard errors associated with each estimate (0.4 in both instances), the difference is statistically significant and supports the statement made.

In contrast, *Indicator 16* compares the percentage of 17-year-old males and females who achieved a score of 300 or more on the mathematics portion of the National Assessment of Educational Progress in 1996. About 63 percent of males achieved this score compared with 58 percent of females. The difference of nearly 5 percentage points is larger than in the previous example, but the standard errors are also larger (1.8 and 2.2, respectively). The difference is not statistically significant. In the absence of this significance, the indicator appropriately notes that males and females were equally likely to score 300 or more. *Indicator 19* provides a similar example. The average score of Italian students in their final year of secondary school on an international test of achievement in advanced mathematics was more than 30 points higher than that of U.S. 12th-graders. Again, however, the difference is not statistically significant; it is thus proper to indicate that the average scores of U.S. and Italian students are similar.

Although values reported in the supplemental tables are often reported to one decimal place (e.g., 76.5 percent), values reported in each indicator are typically rounded to whole numbers (with any value of .5 or above rounded to the next highest whole number). Due to rounding, cumulative percentages may sometimes equal 99 or 101 percent, rather than 100.

NOTE

[1] If there are five racial-ethnic groups in a sample of 1,500, the researcher would have less confidence in the results for each of the groups individually than would be the case for the entire sample, because there are fewer people in the subgroup.

# Acknowledgments

This volume of *The Condition of Education* was authored by a team of analysts under the general direction of John Wirt and Tom Snyder with technical review by Marilyn McMillen (Chief Statistician of NCES), Ellen Bradburn (Technical Advisor), and many others. Rebecca Pratt of Pinkerton Computer Consultants, Inc. (PCCI), was the managing editor. Richard Tobin of the American Institutes for Research's Education Services Statistics Institute (ESSI) helped in reviewing indicators as they were developed.

Readers of previous editions of this publication will notice the new design and format of *The Condition of Education 2000*. This new design was created by Mark Ricks, Allison Pinckney, and Rebecca Pratt of PCCI, with suggestions by Leslie Retallick and Barbara Kridl of MPR Associates (MPR) and many others.

The key contributors to *The Condition of Education* are the authors of the individual indicators. As a matter of practice the authorship of individual indicators is not given in the volume since each indicator is the product of many people. Nonetheless, substantial expertise and analytical ability are required to craft an indicator from data that tells an important story in a compelling manner using text, graphs, and tables economically. Many indicators in this volume were originally conceived for the Condition of Education and involved extensive analyses of data. Others were adapted from existing NCES reports or analyses authored by others.

The authors of the indicators are primarily from three organizations. The authors of indicators at MPR include Susan Choy, Robin Henke, Lawrence Kojaku, Xianglei Chen, Robert Fitzgerald, Phillip Kaufman, and Martha Alt. From PCCI, the authors include Jennifer Sable, Yupin Bae, Janis Stennett, James Sexton, and Daniele Beahm. From the American Institutes for Research, the authors include Allison Gruner, Janna Siegal, Karen Dauer, Elizabeth Rowe, and Marianne Perie; as well as Kristin Denton, Satoshi Watanabe, and Stephen Provasnik from ESSI. Clifford Adelman of the Office of Educational Research and Improvement and Jerry West of NCES also authored indicators. Nicholas Zill of Westat, Inc. and Jerry West authored the essay on beginning kindergarteners at the front of the volume. In addition, Yupin Bae served as the section leader for Section 1, Allison Gruner for Section 2, Susan Choy for Sections 3 and 5, Jennifer Sable for Section 4, and Satoshi Watanabe for Section 6.

Programming and other analytical assistance was provided by Huong Huyen, Daniele Beahm, Steve Agbayani, Mark Glander, YaFen Mu, Michelle Brown, Thuy Dam, Imin Hung, and Dan Hefron of PCCI; and Yann-Yann Sheih of ESSI. Each indicator was checked and edited by a team of editors. The editors included Rebecca Pratt, Ross J. Pfile, and Sonia Connor of PCCI; Andrea Livingston, Barbara Kridl, and Karyn Madden of MPR; and Julia Marshall of ESSI.

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Allison Pinckney desktopped the publication and prepared it for printing.

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# Entering Kindergarten: A Portrait of American Children When They Begin School

*Nicholas Zill and Jerry West*

What knowledge and skills do children possess when they start school? How prepared are they for the social and academic demands of the classroom? Can they get along in a large group of children? Can they sit still and pay attention? Are they interested in learning? How do knowledge, skills, and behavior vary across individuals and among groups of children, such as older versus younger pupils, girls versus boys, and children from high-risk as opposed to more ordinary family circumstances?

## ■ *Why is it important to know what children are like at school entry?*

The answers to this question are important for policy and practice. What a child knows and how he or she behaves are products of both genetic endowment and the child's experiences before entering school (Willerman 1979; Plomin 1990). Thus, measures of children's knowledge and behavior at school entry can serve as indicators of how well families, child-care institutions, and preschool programs prepare children for school. At the same time, these measures provide guidance about what kind of curriculum might be appropriate for the first year of school (Freeman and Hatch 1989; Knudsen-Lindauer and Harris 1989). If teachers are aware of the skills and abilities that the typical child has mastered before the first day of class, teachers and school systems are less likely to design a course of study that is either too challenging or not challenging enough for the typical child. In this regard, it is useful to appreciate not only what the average child knows at school entry but also what the range of knowledge is across an entire class of children.

Group differences at school entry are important for appraising how well the schools have done at the end of the first and subsequent school years. Although differences in achievement found at the end of the school year may have been present at the beginning of the year, we cannot know this unless skills are measured at the beginning of the year. Without this information, we cannot properly appraise how much growth has occurred. It may be concluded erroneously that schools are producing superior achievement because of the high caliber of their instruction, when, in fact, schools may be maintaining (or even diminishing) advantages that their pupils had when entering school.

## ■ *Why is it difficult to assess early knowledge and skills?*

Although measures of children's knowledge, skills, and behavior at school entry are valuable, such measures are not easy to obtain. Most children can neither read nor write when they enter school, so we cannot simply distribute test booklets and ask young children to provide machine-scoreable answers to a series of multiple-choice questions. In-person, one-on-one assessments are required. Each assessment session should not be lengthy because young children tire easily and have limited attention spans. Even individualized assessments may not reflect a beginning pupil's knowledge because of individual differences in shyness with unfamiliar adults or because the child comes from a family in which English is not the primary language spoken at home.

To complicate matters further, experts in child development have recommended that appraisals of children's status at school entry not be limited to academic knowledge and skills but should include evaluations of "the whole child" (Resource Group on School Readiness 1991). For example, the National Education Goals Panel's Technical Planning Group on School Readiness identified five domains of development that are important to a child's preparation for school: physical well-being and motor development; social and emotional development; approaches to learning; language usage; and cognition and general knowledge (Goal

# Entering Kindergarten: A Portrait of American Children When They Begin School

**Continued**

One Technical Planning Group 1993). The Group recommended that assessments of school readiness should involve the collection of information from parents and teachers, as well as the direct assessments of the children themselves.

There is also the question of which year should be considered as the first year of school, kindergarten or first grade. Although school attendance is not mandatory in most states until first grade, national surveys of parents of early elementary pupils show that 98 percent of primary school children attended kindergarten before entering first grade (West, Germino-Hausken, Chandler, and Collins 1992). Thus, kindergarten is now the initial year of formal schooling for nearly all children in the United States.

## NEW SOURCE OF DATA ON YOUNG CHILDREN

Until recently, we have lacked systematic information about what children know and can do at school entry. The data that have been available depended on reports about children's skills from the parents of preschool children (Zill, Collins, West, and Germino-Hausken 1995; Zill 1999), rather than on direct assessments of the children themselves. With the launching of the U.S. Department of Education's Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K) in the fall of 1998, however, measures of the knowledge, skills, health, and behavior of a large and nationally representative sample of American kindergartners are available.

In fall 1998, trained assessors conducted standardized, one-on-one assessments with about 19,000 children from a national probability sample of kindergartners attending 940 public and private schools.[1] Of the children assessed, 95 percent were in kindergarten for the first time. These children are the focus of this essay. The remaining children were either repeating kindergarten or attending the second year of 2-year kindergarten programs. Information about the children, their families, and their schools was also gathered through interviews with parents, questionnaires to teachers and school administrators, and abstracts of school records. The ECLS-K plans to follow the sample of American kindergartners through the 5th grade.

## ASSESSING EARLY ACADEMIC SKILLS

Core academic skills that children learn in elementary school are the traditional "three R's" of reading, writing, and arithmetic. Before they can read, write, or calculate, however, children must acquire rudimentary skills that serve as stepping stones toward mastery of the more advanced and complex skills. For reading, these rudimentary skills include becoming familiar with the conventions of print (such as the English-language convention of reading from left to right and from top to bottom); learning to recognize letters by name; associating sounds with letters or letter combinations; and understanding the meaning of many spoken words and phrases (Snow, Burns, and Griffin 1998). Rudimentary skills that form the foundation for mastery of arithmetic include rote counting; making one-to-one correspondences between spoken numbers and series of counted objects; recognizing written numerals; and understanding greater, lesser, and equal relationships (Ginsburg 1989).

These skills are not usually required for admission to kindergarten. Indeed, most kindergarten teachers feel that knowing letters and numbers is not crucial for school readiness because they can and do teach children these skills in kindergarten (West, Germino-Hausken, and Collins 1993). Nonetheless, many young children have learned some of these skills before entering school from interacting with their parents and siblings. Others learn the rudimentary skills in center-based child-care or

## Entering Kindergarten

**Continued**

prekindergarten programs. Developmental research indicates that children who have mastered these skills in the preschool years are more likely to learn to read, write, and calculate earlier and more proficiently than those who have not (Siegler and Richards 1982). What is less clear, however, is whether explicitly teaching these skills in preschool boosts children's later literacy and numeracy. Some developmentalists believe this to be the case, but the evidence is not yet definitive.

The ECLS-K assessments were designed to measure children's early academic skills in each of three domains: reading, mathematics, and general knowledge. (General knowledge includes primarily questions of fact and understanding about nature, science, social studies, and citizenship.) The assessment batteries were intended for use with both kindergartners and first -graders. The batteries contained items suitable not just for the average child but also for those whose development is advanced or substantially delayed. Because the batteries were designed to be administered repeatedly to the same children, the study will be able to measure growth in children's knowledge and skills from kindergarten entry to the end of kindergarten, into first grade, and beyond. A first-stage routing test in each domain helped to ensure that children received items that were neither much too easy nor much too difficult for their current levels of knowledge.

Although the assessors read all questions to each child, the tasks did require a basic knowledge of spoken English to be administered successfully. Therefore, preliminary screening was done of children from families in which English was not the primary language spoken at home. Those who did not score above a certain level were excluded from the English-language assessments.[2] Children from Hispanic families who were excluded on this basis did receive a psychomotor assessment and oral language and mathematics assessments in Spanish. The cognitive assessment data presented here and elsewhere in this volume are only for the children who completed the assessments in English. Approximately 19 percent of Asian children and 30 percent of Hispanic children attending kindergarten for the first time were not assessed in English.

Every effort was made to include children with disabilities in the assessment process. Despite this effort, children with disabilities that precluded them from hearing the questions, seeing the stimulus plates, or responding orally or by pointing had to be excluded. Children with individualized instruction plans that prohibited them from being assessed were also excluded. Less than 1 percent of all first-time kindergartners were excluded from the assessment for these reasons.

*Proficiency levels in reading.* In addition to an overall scale score, clusters of items included in the ECLS-K assessments of reading and mathematics appraised whether children were proficient in several stepping-stone skills toward literacy and numeracy. The reading assessment included five proficiency levels: (1) identifying uppercase and lowercase letters of the alphabet by name; (2) associating letters with sounds at the beginning of words; (3) associating letters with sounds at the end of words; (4) recognizing common words by sight; and (5) reading words in context. These five levels reflected a progression of skills and knowledge: if a child had mastered one of the higher levels, he or she passed the items that comprised the earlier levels as well. Another reading skill assessed in the ECLS-K battery (conventions of print) did not fit neatly into this progression but was at about the same level of difficulty as recognizing letters. Several tasks asked the children which way to go when reading and where they would find the end of a printed story.

## Entering Kindergarten

Continued

*Proficiency levels in mathematics.* The items in the mathematics assessment could also be grouped into a five-level progression of skills, though the mathematics clusters were less homogeneous in content than the reading clusters. The clusters of mathematics items included (1) identifying some one-digit numerals, recognizing geometric shapes, and one-to-one counting of up to ten objects; (2) reading all single-digit numerals, counting beyond 10, recognizing a sequence of patterns, and using nonstandard units of length to compare objects; (3) reading 2-digit numerals, recognizing the next number in a sequence, identifying the ordinal position of an object, and solving a simple word problem; (4) solving simple addition and subtraction problems; and (5) solving simple multiplication and division problems and recognizing more complex number patterns.

*General knowledge.* The subject matter of the assessment of general knowledge was too diverse and insufficiently ranked or graded to permit forming a set of proficiency levels. A score was calculated to represent each child's breadth and depth of understanding of the world around them. This assessment captured information on children's conception and understanding of the social, physical, and natural world and on their ability to draw inferences and comprehend implications. It also measured the skills children need to establish relationships between and among objects, events, or people and to make inferences and comprehend the implications of verbal and pictorial concepts. The assessment addressed such topical areas as history, geography, and science.

### NONCOGNITIVE ASPECTS OF SCHOOL READINESS

Many teachers and researchers believe that a child's ultimate success in school does not depend primarily on the knowledge and academic skills that the child brings to the classroom (West, Germino-Hausken, and Collins 1993). Rather, they view noncognitive aspects of school readiness—such as a child's physical health and motor coordination, emotional well-being and ability to cooperate with other children, and curiosity and eagerness to learn—as being equally or more important for school success (National Association for the Education of Young Children 1990; Kagan 1990; Kagan, Moore, and Bredekamp 1995). The ECLS-K adopted this "whole child" view of school readiness. The direct child assessment in the fall of the kindergarten year included measures of physical growth and fine and gross motor development. The assessment collected reports about children's health, social skills, problem behavior, and approaches to learning from parents and teachers.

### ■ *What does the typical child know at school entry?*

A typical child who enters kindergarten in the United States is five-and-a-half years old at the beginning of the school year. What does this typical kindergartner know, and what kinds of early reading and mathematical skills and general knowledge does this child possess?[3] Many of the descriptions of first-time kindergartners and the ECLS-K findings reported in these sections come from *America's Kindergartners* (West, Denton, and Germino-Hausken 2000).

#### Most children know their letters

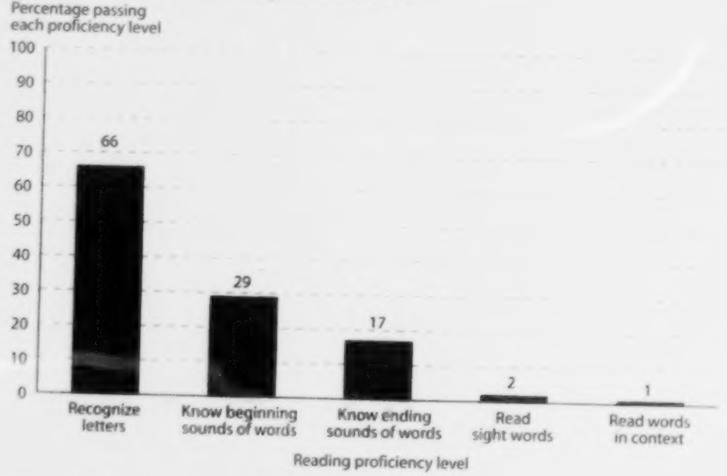
A majority of entering kindergartners (66 percent) can recognize letters of the alphabet by name, whether they are in upper or lower case (figure 1). Many (61 percent) have two or more print familiarity skills such as knowing that English print is read from left to right and from the end of one line to the beginning of the next line and knowing where a story ends.

The ECLS-K found that the modal kindergartner does not yet possess other early reading skills. He or she cannot point to letters repre-

## Entering Kindergarten

**Continued**

Figure 1.— Reading skills of first-time kindergartners: Fall 1998



NOTE: Based on those assessed in English. Excludes 19 percent of Asian and 30 percent of Hispanic children.

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

senting sounds at the beginning or end of simple words, read basic words by sight, or read more complex words in the context of a sentence. Of five proficiency levels identified in the ECLS-K reading assessment, the average kindergartner had attained the first level, but no more. Two-thirds successfully performed tasks at this level.

### Most children can count more than 10 objects

Most first-time kindergartners (94 percent) can recognize some single-digit numerals, identify simple geometric figures like squares and circles, and count to 10 (figure 2). Many of the children (58 percent) can recognize all single-digit numbers, count beyond 10, identify the similarities in patterns, and compare the relative length of objects using nonstandard units. Kindergarten teachers can build on these skills to help children learn basic number operations and other mathematical skills.

On the other hand, relatively fewer kindergartners (20 percent) can read a two-digit numeral; identify the ordinal position of an object (e.g., third flower in a row of flowers); or recognize the next number in a sequence (e.g., 2, 4, 6, 8, and 10). Also, very few (4 percent) can do simple addition or subtraction or do simple multiplication or division (less than 1 percent). Of five proficiency levels identified in the ECLS-K mathematics assessment, a majority of kindergartners (58 percent) have attained the second level.

### ■ *What is the typical child's health and behavior like at school entry?*

What can be said about the noncognitive aspects of school readiness? What is the average kindergartner like with respect to physical health and growth, coordination, and ability to pay attention to the teacher, cooperate with other children, and display curiosity and eagerness to learn? What proportions of entering kindergartners have significant problems with their health or behavior? *America's Kindergartners* (West, Denton, and Germino-

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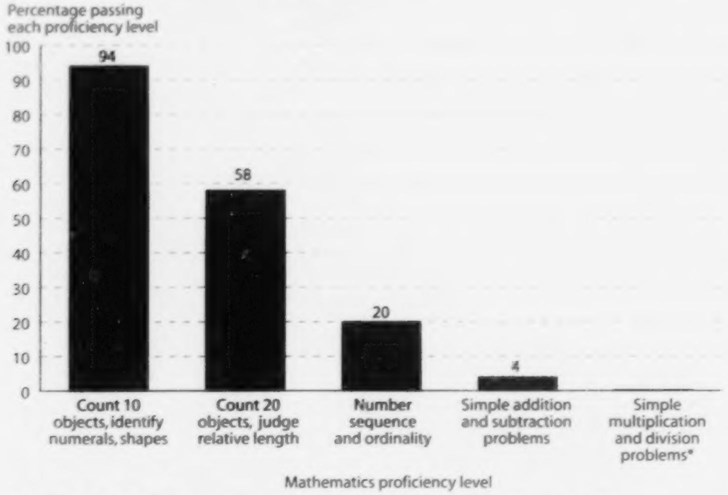
## Entering Kindergarten

**Continued**

**Figure 2.— Mathematics skills of first-time kindergartners: Fall 1998**



* Data point for "simple multiplication and division problems" is less than 0.5 percent and is too small to be discernable in the graph.

NOTE: Based on those assessed in English. Excludes 19 percent of Asian and 30 percent of Hispanic children.

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

Hausken 2000) provides a portrait of these characteristics.

### Most are in very good to excellent health

On a five-category scale of general health status, ranging from "excellent" to "poor," 51 percent of kindergartners are rated in the highest category by their parents, and 83 percent are in at least "very good" health. No more than 3 percent are in "fair" or "poor" health.

Children's height and weight are other, more objective indicators of their general health and well-being. At kindergarten entrance, the average boy is 3 feet, 9 inches tall and weighs 47 pounds. The average girl stands 3 feet, 8 inches tall and weighs 46 pounds. Although there is considerable variation in height and weight from child to child, practically no children in the United States today are so underweight as to be deemed clinically malnourished (Reed 1984). In contrast, more than one child in 10 has too much weight for his or her height. Twelve percent of males and 11 percent of females have body mass indexes high enough to be labeled at risk for being overweight (West, Dention, and Germino-Hausken 2000; Rosner, Prineas, Loggie, and Daniels 1998).

### Some experience developmental difficulties

Although most kindergarten children are in good to excellent health, substantial minorities have developmental difficulties that are relevant to their performance in school. According to parents, nearly one entering kindergartner in five (18 percent) is reported to be considerably more active than his or her peers (i.e., shows signs of hyperactivity). One in six (13 percent) is described as having difficulty paying attention for sustained periods. And 11 percent have difficulty articulating words or being able to communicate clearly with oth-

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## Entering Kindergarten

**Continued**

ers. Relatively small percentages experience problems with vision (6 percent), hearing (3 percent), or coordination (4 percent). Although parental reports of developmental difficulties do not necessarily indicate the presence of a diagnosed impairment, these reports do indicate that the child has a greater vulnerability to poorer grades and lesser academic attainment in the future (Horn and Packard 1985; Pianta and McCoy 1997).

### Most are reasonably well behaved

According to both teachers and parents, most kindergartners are able to get along with other children in a group situation. A minority of children exhibit aggressive or combative behavior with any frequency. According to teachers, about three-quarters readily accept peer ideas for group activities and form and maintain friendships without difficulty. Fewer children, but still a majority, often comfort or help others. Parents are more positive about their children's cooperative behavior: 80–89 percent were described as easily joining others in play, forming friendships without difficulty, and helping or comforting others.

Most kindergartners do not lose their temper easily or get into arguments or fights with other children with any frequency. According to the teachers surveyed, most children (90 percent) exhibit these problem behaviors "never" or "sometimes." Parents are more likely to report that their children get angry easily or frequently argue or fight with others. Even according to parents, however, most children (between 67 and 85 percent) engage in such behavior no more than "sometimes" or "never."

### Most exhibit a positive approach to classroom tasks

According to teachers, the typical kindergarten child is eager to learn new things, pays attention reasonably well in class, and persists in completing tasks. Between two-thirds and three-quarters exhibit these positive approaches to learning "often" or "very often." Nonetheless, substantial minorities of children do not have a particularly positive attitude toward classroom tasks: one-quarter are "never" or "sometimes" eager to learn, and one-third have difficulty paying attention in class.

## ■ *What range of skills do kindergarten teachers encounter?*

The findings from *America's Kindergartners* (West, Denton, and Germino-Hausken 2000) provide a profile of what beginning kindergartners know and can do. Most first-time kindergartners have basic reading and mathematics skills, basic social skills, and are healthy. In addition to this news, *America's Kindergartners* found that the diverse population of children entering school demonstrates a considerable range of knowledge and skills.

### Some kindergartners have advanced skills

Sizable minorities of kindergartners start school with early reading or mathematics skills that are one or two proficiency levels higher than the skills of the modal kindergartner. Small numbers come to school with very advanced skills, three or four proficiency levels higher than most. For example, the ECLS-K found that:

- Twenty-nine percent of kindergartners can do more than recognize letters by name: they can associate them with sounds at the beginning of words. Seventeen percent can associate letters with sounds at the end of words as well.
- Two percent of pupils (1in 50) begin kindergarten able to read simple sight words, and 1 percent are also able to read more complex words in sentences. These children already know how to read.

## Entering Kindergarten

Continued

- Twenty percent of kindergartners can do more than count and read single-digit numerals: they can read two-digit numerals, identify the ordinal position of an object in a series, determine the next number in a sequence, and solve simple word problems.
- Four percent of pupils begin kindergarten able to solve addition and subtraction problems. These children are already doing arithmetic.

### Some kindergartners have skills that lag behind

Most first-time kindergartners can recognize some single-digit numerals, identify simple geometric figures, and count to 10. A majority can recognize all single-digit numbers, count beyond 10, identify the similarities in patterns, and compare the relative lengths of objects using nonstandard units. However, many children still do not have these skills at the beginning of kindergarten. The results of the ECLS-K indicate that, among entering kindergartners:

- Eighteen percent cannot demonstrate familiarity with the conventions of print: they do not know that English print is read from left to right and from top to bottom or where a story ends.
- Thirty-four percent cannot identify letters of the alphabet by name: they are not yet at the first level of reading proficiency.
- Forty-two percent cannot count 20 objects, read more difficult single-digit numerals, and judge the relative lengths of several rod-like objects; however, most of these pupils (36 percent of all children) can count 10 objects and read easier numerals.
- Six percent cannot count 10 objects and identify simple numerals and shapes; they are not yet at the first level of mathematics proficiency.

### ■ *What factors help account for variations in knowledge, health, and behavior at school entry?*

Who are the children who enter kindergarten with skills that exceed or lag behind those of the average child? Who are the children with significant problems with respect to their health or behavior? The findings in *America's Kindergartners* demonstrate significant differences in children's early academic skills across pupils of various ages, between girls and boys, as well as between children from high-risk versus more ordinary family circumstances. Age, sex, and family risk factors are also related to some of the observed variation in children's health status and behavior at school entry.

### Age-related differences in school readiness

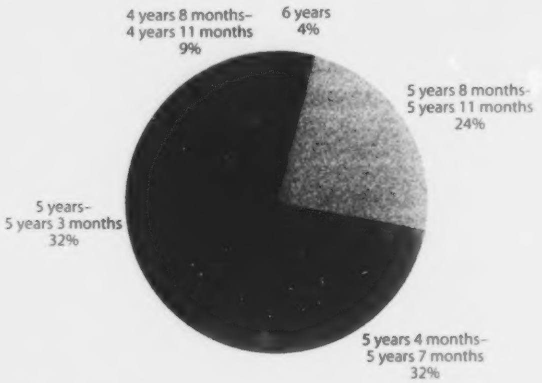
Variation in children's ages is associated with differences in their knowledge, skills, and behavior. The ECLS-K found that nearly two-thirds of kindergartners were between 5 years and 5 years, 8 months as of September 1st of the reference year (1998) (figure 3). Nine percent were not yet 5 years old as of the same date. Nearly one-quarter were almost 6 years old (5 years, 8 months to 5 years, 11 months), and 4 percent were already 6.

The variation in age at entry is primarily due to three causes. First, school systems differ in their policies regarding how old children must be and by what date in order to qualify for kindergarten entry. Second, children are born throughout the year, so some just make and others just miss the cutoff date. Third, some parents choose to delay their children's entry into kindergarten. The ECLS-K findings support the contention (Zill, Loomis, and West 1997) that older students often have advantages with respect to the knowledge and self-regulation skills they bring to the classroom.

## Entering Kindergarten

**Continued**

Figure 3.— Percentage distribution of first-time kindergartners, by age at kindergarten entrance: Fall 1998



NOTE: Percentages may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

### Older kindergartners are closer to being able to read

A larger majority of the older than the younger children have attained the first level of reading proficiency (recognizing letters of the alphabet), and larger minorities of the older children have passed the higher proficiency levels. The ECLS-K data show the following:

- Seventy-three percent of kindergartners who are about to turn 6 at the start of the school year are able to identify letters by name (i.e., they pass reading proficiency level one), whereas 56 percent of children who have not yet turned 5 are able to do this. The proportion of those who pass reading level one in the 5 to 5 and two-thirds age group falls inbetween the younger and older pupils.
- Twice as many of the older than the younger children are at reading proficiency level three: they are able to associate letters with sounds at the beginnings and ends of words. Twenty-two percent of pupils about to turn 6 can do this, compared with 11 percent of those about to turn 5. Again, those 5 to 5 and two-thirds fall inbetween the younger and older children.
- The small number who are at an advanced reading level is four times larger among the older than the younger children. Four percent of pupils about to turn 6 can read easy words by sight, compared with 1 percent who can do this among pupils about to turn 5 or who became 5 within the past 4 months (May–August births).

### Older kindergartners are closer to being able to do arithmetic

A similar positive relationship between knowledge and age was found with respect to proficiency in early mathematics skills. Here the average older pupil is at a higher proficiency level than the typical pupil in the youngest age group. Specifically:

- Two-thirds of those about to turn 6 are at mathematics proficiency level two. They are able to read numerals, count beyond 10, recognize patterns of figures, and com-

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## Entering Kindergarten

**Continued**

pare the relative lengths of objects. By contrast, 42 percent of those who have not yet turned 5 can do these things. About half (51 percent) of pupils who have turned 5 within the past 4 months are able to demonstrate level two mathematics skills.

- Two to three times as many of the older than the younger children are at the third mathematics proficiency level: they are able to read two-digit numerals and recognize the ordinal position of an object. Twenty-nine percent of pupils who are about to turn 6 have these skills. By contrast, 14 percent of pupils who have just turned 5, and 10 percent of those who are not yet 5, can demonstrate level three mathematics skills.
- The proportion at an advanced mathematics level is 4 to 5 times larger among the older kindergartners. Seven percent of pupils who enter at almost age 6 can do addition and subtraction problems, compared with 2 percent of pupils who enter at age 5.

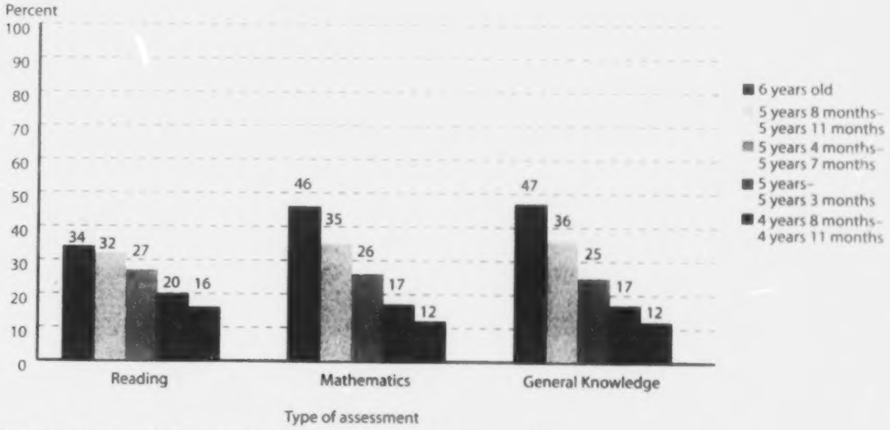
### Older kindergartners know more about nature, science, and human society

As with reading and mathematics, the ECLS-K results indicated a positive relationship between age at school entry and performance on the general knowledge assessment. For example:

- Roughly one-third of pupils who are almost age 6 achieve general knowledge scores in the top quartile of the score distribution. By contrast, 17 percent of pupils who have just turned 5, and 12 percent of those who are not yet 5, score in the top quartile (figure 4).
- Forty-two percent of the youngest group have scores in the bottom quartile of the score distribution, compared with 16 percent of the children just turning 6.

Although the ECLS-K results showed significant positive relationships between children's age and their reading and mathematics skills and general knowledge, age differences do not account for all of the variation in pupils' knowl-

**Figure 4.— Percentage of first-time kindergartners in highest quartile of assessments, by age at entry and type of assessment: Fall 1998**



NOTE: Based on those assessed in English. Excludes 19 percent of Asian and 30 percent of Hispanic children.

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

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## Entering Kindergarten

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edge and skills at school entry. Even among kindergartners of the same age, there are considerable differences from pupil to pupil in what each one knows and can do.

### Older children have more advanced motor skills

Older children have better coordination than do younger children. This is true with respect to both fine motor skills, such as using a pencil to copy a geometric figure, and gross motor skills, such as walking backward on a line or hopping on one foot. The psychomotor assessment showed, for example, that:

- Children who are nearly 6 at the start of the kindergarten year are twice as likely as those who have not yet turned 5 to score in the top third of the distribution on fine motor skills. Forty-four percent of the former group scored in the top third, compared with 22 percent of the latter group. The older students were half as likely as the youngest students to score in the bottom third of the distribution (20 versus 45 percent).
- Likewise, children about to become 6 were two-thirds more likely than those about to turn 5 to score in the top portion of the distribution in the assessment of gross motor skills (46 versus 28 percent). The older group was 60 percent as likely to score in the bottom third in gross motor skills (21 percent versus 37 percent).

### Some developmental problems are more common among the oldest kindergartners

The population of first-time kindergartners includes a group of children who are much older than their peers. These children are already 6 at the start of kindergarten and could have begun kindergarten the year before (January–August 1992 births). Children in this older group have higher frequencies of some developmental difficulties. For example, these 6-year-olds are (1) twice as likely as any other age group to have problems with their coordination (8 versus 3–4 percent), and (2) more likely than any other group to have difficulties with speech articulation (18 versus 10–11 percent). This may be one reason why the parents of this group of older children choose to delay their children's entrance to kindergarten by a year.

### Older children are more socially adept and less prone to problem behaviors

According to teachers and, to a lesser extent, parents, older children engage in cooperative behavior more frequently than younger children, and are less prone to angry, argumentative, or combative behavior. For example, the results show that:

- Compared with children not yet 5, larger majorities of those about to turn 6 are described by teachers as often accepting peers' ideas for group activities (75 versus 69 percent) and forming and maintaining friendships (80 versus 74 percent). A majority of the older children, as opposed to a minority of the younger ones, comfort or help other children often (54 versus 46 percent).
- Compared with children not yet 5, smaller minorities of those about to turn 6 are described by teachers as getting angry easily (10 versus 14 percent) and as fighting with others often or very often (9 versus 12 percent).

Parents' ratings of children's positive social behavior show that students who are almost 6 are more likely to easily join others in play than are the the youngest kindergartners (87 versus 82 percent). However, according to parents, there is little difference between older and younger kindergartners with respect to making and keeping friends or comforting or help-

## Entering Kindergarten

**Continued**

ing others. Parents' reports also indicate that fewer older children get angry easily but that no significant age differences exist with respect to the frequency of arguing and fighting with others.

### Older children are more persistent

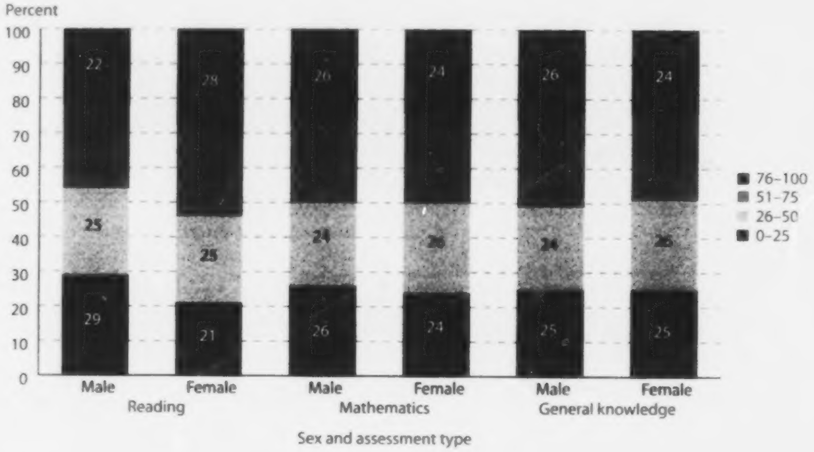
According to teachers and, to a lesser extent, parents, older children exhibit a more positive approach to classroom learning tasks. In teachers' ratings, for example, compared with children not yet 5, larger majorities of those about to become 6 are described as showing eagerness to learn new things (80 versus 66 percent); paying attention well (73 versus 57 percent); and persisting in completing tasks (78 versus 63 percent). Parents' ratings of children's approaches to learning also show age differences with respect to the frequency of working at something until finished but no significant differences with respect to eagerness to learn new things.

With knowledge and skills as well as social maturity, age differences do not explain all or even most of the variation in children at school entry. Nor can the differences account for the bulk of the variation in problem behavior or approaches to learning. Even among kindergartners of the same age, there are considerable differences from pupil to pupil in social skills and behavior.

- *Are there sex-related differences in school readiness for kindergartners?*

The fact that a kindergartner is a girl or boy accounts for little of the variation observed in children's knowledge and skills. Previous studies (e.g., Gullo and Burton 1992) have found girls to mature earlier than boys, but the ECLS-K showed that sex differences are more consistent for children's social skills and classroom behavior than for early academic skills (figure 5).

**Figure 5.— Percentage distribution of male and female pupils, by assessment quartile in 3 skill domains at kindergarten entry: Fall 1998**



NOTE: Based on those assessed in English. Excludes 19 percent of Asian and 30 percent of Hispanic children.

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

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### Girls and boys have similar skills, although girls are slightly ahead in reading

On average, girls' reading skills are slightly more advanced than those of boys, but most girls and boys in kindergarten are at the first level of reading proficiency. The proportions of children who are one or two proficiency levels ahead of the average are larger among females than among males. However, for the small numbers who are advanced—those who are actually reading words or sentences at school entry—these fractions are essentially equal for the two sexes. Here are some illustrative findings:

- Seventy percent of female kindergartners know their letters at school entry, compared with 62 percent of males.
- More girls than boys can associate letters with sounds at the beginning (32 versus 26 percent, respectively) and ending of words (19 and 15 percent, respectively).
- Three percent of boys and 2 percent of girls can read words by sight at school entry (the fourth proficiency level).

Female and male kindergartners have equal mean scores and similar score distributions in the ECLS-K assessments of mathematics and general knowledge. Though males may excel in math and science by middle and secondary school (NCES 1998), no differences are apparent at school entry.

### More boys experience developmental difficulties

Parents' descriptions of the general health status of their children are similar for male and female children. There are more sex differences with respect to the relative frequency of several developmental problems. According to reports from parents, for example:

- Twice as many boys as girls (14 versus 7 percent) have difficulty articulating words clearly and communicating with others.
- Twice as many boys as girls (18 versus 9 percent) have difficulty paying attention for sustained periods.
- One-quarter more boys than girls (20 versus 16 percent) are a lot more active than their peers.

### Girls are more prosocial and less prone to problem behavior

According to both teachers and parents, girls and boys differ in caring and sharing behavior. For example:

- Teachers report that 60 percent of girls versus 43 percent of boys are often comforting or helpful to classmates.
- Teachers describe larger majorities of girls than boys as often accepting peers' ideas for group activities (77 versus 71 percent) and forming and maintaining friendships (80 versus 73 percent).

Parents generally describe their children as engaging in friendly or cooperative behavior more frequently than teachers do. No gender difference is evident in parents' ratings of how frequently their children easily join others in play or make and keep friends. Like teachers, parents describe more female than male kindergartners as comforting or helping others frequently.

Although a minority of either sex is described as engaging in angry or combative behavior often or very often, teachers describe more boys than girls as often engaging in these forms of antisocial conduct. For example, at least half again as many boys as girls are said to get angry easily (14 versus 9 percent) and to argue with others (13 versus 8 percent).

## Entering Kindergarten

Parents describe more children as often engaging in aggressive behavior, and parents see fewer differences between boys and girls in this regard. Parents perceive slightly more boys than girls as getting angry easily (19 versus 15 percent). But about as many girls as boys are said to be argumentative (32 and 33 percent, respectively) or to fight with others frequently (14 and 16 percent, respectively).

### Girls have a more positive approach to classroom tasks

Teachers report that girls are more likely than boys to have a positive orientation to structured learning activities. More girls than boys are eager to learn, more pay attention in class, and more persist in completing tasks. According to teachers:

- Seventy-eight percent of girls versus 71 percent of boys are often eager to learn.
- Seventy-four percent of girls and 58 percent of boys usually pay attention well.
- Seventy-eight percent of girls versus 65 percent of boys often persist in completing assigned tasks.

Parents perceive more children to be eager to learn new things than teachers do, and parents say this is true of as many boys (91 percent) as girls (93 percent). Parents report that girls are more likely to persist at learning tasks than are boys (77 percent versus 69 percent).

Thus, even early in kindergarten, although boys and girls have similar academic skills, boys display more developmental difficulties, more disruptive conduct in class, and less positive orientations to learning activities.

- *What family background characteristics affect children's skills and knowledge ?*

Several family background characteristics have repeatedly been found to be associated with poor educational outcomes among school-aged children, such as low achievement test scores, grade repetition, suspension or expulsion, and dropping out of high school. These risk factors include having parents who have not completed high school (Bianchi and McArthur 1993; West and Brick 1991; Zill 1996a) and coming from a low-income or welfare-dependent family (Zill et al. 1995). They also include living in a single-parent family (Dawson 1991; Entwisle and Alexander 1995; McLanahan and Sandefur 1994; Zill 1996b) and having parents who speak a language other than English in the home (Bianchi and McArthur 1993; Kao 1999; Rumberger and Larson 1998). Research has found that children who have one or more of these characteristics are more likely to be educationally disadvantaged or have difficulty in school (Pallas, Natriello, and McDill 1989). Although not all children who are at risk do poorly in school, those with such risk factors are, on average, more prone to poor achievement (Kaufman and Bradby 1992).

Children from multiple-risk families seem to be most in danger of achievement difficulties. Nord, Zill, Prince, Clarke, and Ventura (1994) found inverse relationships between cumulative risk scores and vocabulary and mathematics test scores, as did Sameroff, Seifer, Barocas, Zax, and Greenspan (1987) between measures of verbal IQ and social adjustment. Previous studies have also found direct relationships between cumulative risk and the chances of grade repetition or school suspension (Nord, et al. 1994).

The same family factors associated with poor performance in school-aged children have been linked with fewer developmental accomplishments in preschool children, as reported by parents (Zill et al. 1995). What the ECLS-K

## Entering Kindergarten

**Continued**

results showed was that these risk factors are also associated with lower reading and mathematics skills and general knowledge among entering kindergartners in the fall of 1998.

### Nearly half of all entering kindergartners come from families with one or more risk factors

For purposes of the ECLS-K, 4 risk factors were defined:

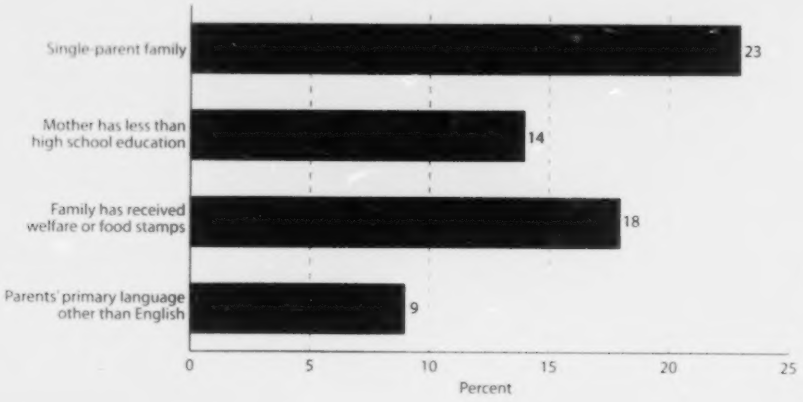
- having a mother with less than a high school education;
- living in a family that received food stamps or cash welfare payments;
- living in a single-parent household; and
- having parents whose primary language is something other than English.

The ECLS-K findings indicated that 46 percent of kindergartners have one or more of these 4 risk factors. Thirty-one percent—nearly one in three—have only one risk factor, while another 16 percent have two or more risk factors (see figures 6 and 7). The preponderance of risk factors may be due to the dramatic changes in living patterns in the United States over the last quarter century, the persistence of poverty, and high rates of immigration, especially from Latin America (Zill 1999).

### Two-thirds of children in large cities are at risk

The proportion of kindergartners who come from at-risk families changes dramatically from urban to suburban and rural America and across different racial-ethnic groups. In cities with populations above 250,000, nearly two-thirds of entering kindergartners have one or more risk factors, and 26 percent have multiple risk factors (see figure 8). In contrast, in the suburbs of large cities and in small towns, the situation is almost reversed. In those communities, nearly two-thirds of kindergartners have none of the four risk factors, and about 1 in 10 have two or more. Rural areas and mid-size cities and their suburbs are similar to the national averages in the frequency of risk factors.

**Figure 6.—Percentage of first-time kindergartners with each of 4 risk factors: Fall 1998**



SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

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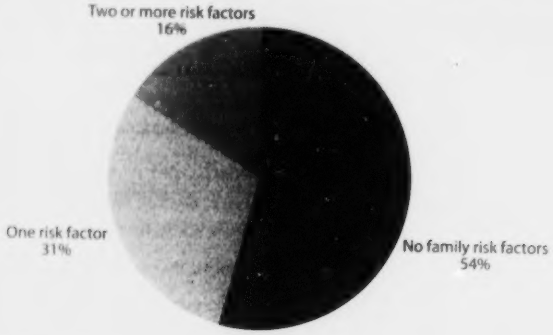
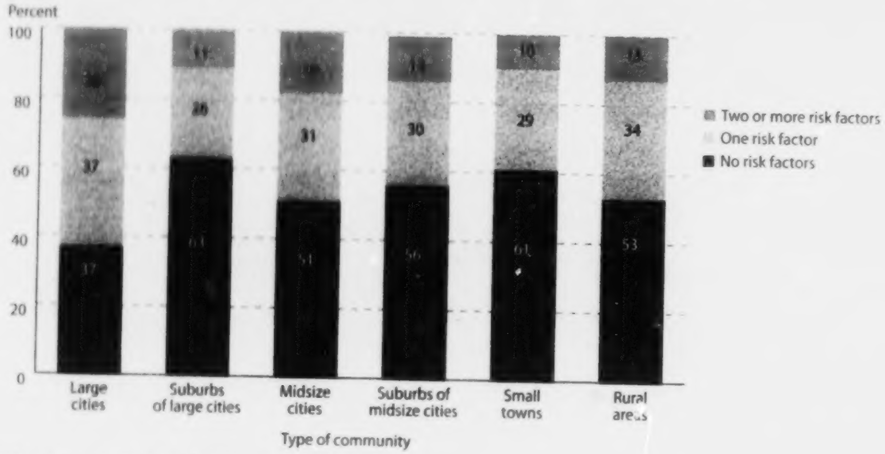
Figure 7.—Percentage distribution of first-time kindergartners, by number of family risk factors: Fall 1998



NOTE: Percentages may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

Figure 8.—Percentage distribution of first-time kindergartners, by number of risk factors and type of community: Fall 1998



NOTE: Percentages may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

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### Minority children are more likely to be at risk

Sociodemographic risk factors are considerably more common among kindergartners from racial-ethnic minorities than among those from white families (see figure 9). Nearly three-quarters of entering kindergartners from black or Hispanic families have one or more risk factors, compared with 29 percent of those from white families. The proportion of children with two or more risk factors is five times larger among Hispanics (33 percent) and four times larger among blacks (27 percent) than among whites (6 percent). Risk factors are also more common among Asian kindergartners. A majority of Asian children (61 percent) have at least one risk factor, but 44 percent have one risk only. The proportion of Asian children with multiple risk factors is 17 percent, about the same proportion as that of all U.S. kindergartners.

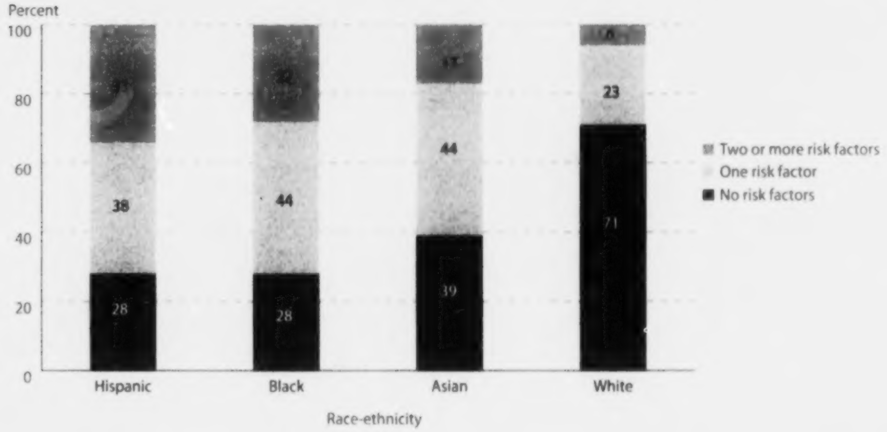
The frequency of risk factors does not vary by age, except for those children in the oldest age group (those who are already 6 years old as of September 1st). Older children have significantly fewer risk factors than do younger children. Two-thirds of the 6-year-olds have none of the four risk factors, and 10 percent have two or more.

### Multiple risk factors

Nearly half of those with multiple risk factors score in the bottom quartile in early reading and mathematics skills, and general knowledge.

Children with one of the four risk factors have early reading and mathematics skills that lag behind those of children with none of the four risk factors (see figure 10). These children's scores in general knowledge on the ECLS-K assessment are also lower than those of children from families with no risk factors (see figure 11). Furthermore, children with two or more risks significantly lag behind those with one risk. Thus, the results from the ECLS-K are consistent with the notion of a cumulative effect of multiple risks on children's early intel-

**Figure 9.—Percentage distribution of first-time kindergartners, by number of risk factors and race-ethnicity: Fall 1998**



NOTE: Percentages may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

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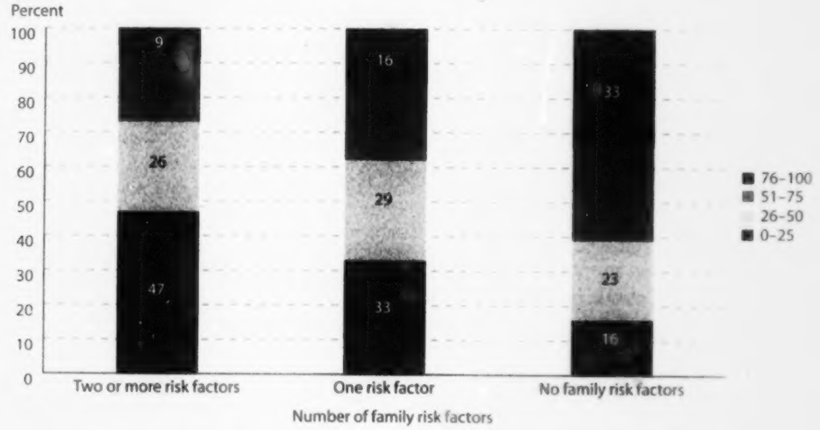
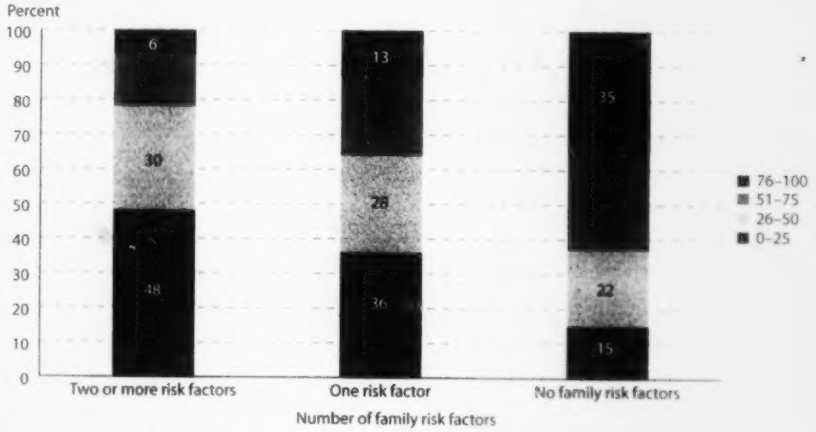
**Figure 10.—Percentage distribution of first-time kindergartners' reading scores, by number of family risk factors: Fall 1998**



NOTE: Based on those assessed in English. Excludes 19 percent of Asian and 30 percent of Hispanic children. Percentages may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

**Figure 11.—Percentage distribution of first-time kindergartners' general knowledge scores, by number of family risk factors: Fall 1998**



NOTE: Based on those assessed in English. Excludes 19 percent of Asian and 30 percent of Hispanic children. Percentages may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

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lectual development. Here are illustrative survey results:

- Children with one risk factor are twice as likely to have reading scores that fall in the lowest 25 percent of the overall skill distribution as children with no risk factors. Thirty-three percent of the single risk group was in the lowest fourth of the distribution, compared with 16 percent of the no risk group.
- Children with two or more risk factors are about three times as likely as those with no risk factors to score in the bottom quartile in reading (47 percent of the multiple risk group were in the bottom quartile).
- Conversely, children with one risk are half as likely to achieve reading scores that are in the highest 25 percent of the skill distribution as those with no risk factors (16 versus 33 percent). Those with multiple risks are one-third as likely to be in the top quartile (9 percent of these children scored in the top quartile).

The relationship between the number of risk factors and the proportions of each group that fall in the bottom and top quartiles of the test score distribution is the same for mathematics and general knowledge as it is for reading. As an illustration, children with multiple risks are about one-sixth as likely to be in the top quarter of general knowledge scores as children with none of the four risk factors.

### Children from families with multiple risks typically do not know their letters and cannot count to 20

In terms of specific reading and mathematics skills that kindergartners with risk factors do or do not have when entering school, the ECLS-K results showed the following:

- Less than half of multiple risk children were at the first proficiency level in reading. Forty-four percent of them could identify letters of the alphabet, compared with 57 percent of children in the single risk group and 75 percent of those in the no risk group (see figure 12).
- Children from families with multiple risk factors were roughly one-third as likely to be able to associate letters with sounds at the ends of words as children from families with none of the four risk factors. Children from families with one risk factor were half as likely to do so. Twenty-two percent of the no risk group, 11 percent of the single risk group, and 6 percent of the multiple risk group were at this third proficiency level in reading.
- Although a large majority (87 percent) of the kindergartners with multiple risk factors were at the first proficiency level in mathematics, less than half were at the second level (see figure 13). Thirty-eight percent of the multiple risk group could count beyond 10 or make judgments of relative length, compared with 48 percent of the single risk group and 68 percent of the no risk group.
- Children from families with multiple risk factors were one-third as likely to be able to recognize 2-digit numerals and identify the ordinal position of an object in a series as children from families with no risk factors. Children from families with one risk factor were half as likely to have these skills. Twenty-seven percent of the no risk group, 13 percent of the single risk group, and 8 percent of the two or more risk group were at this third proficiency level in mathematics.

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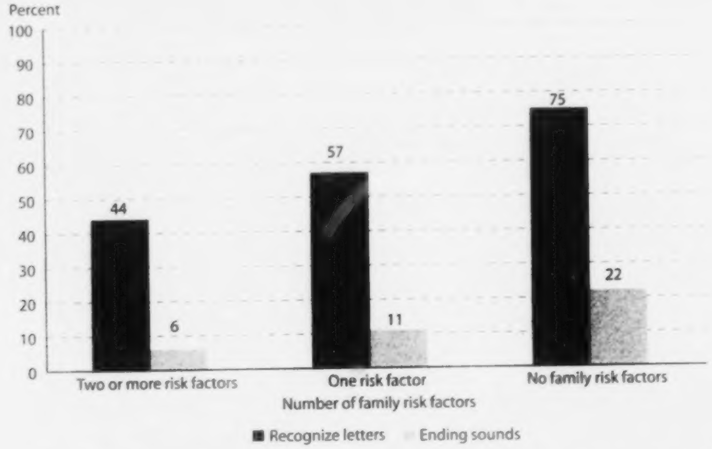
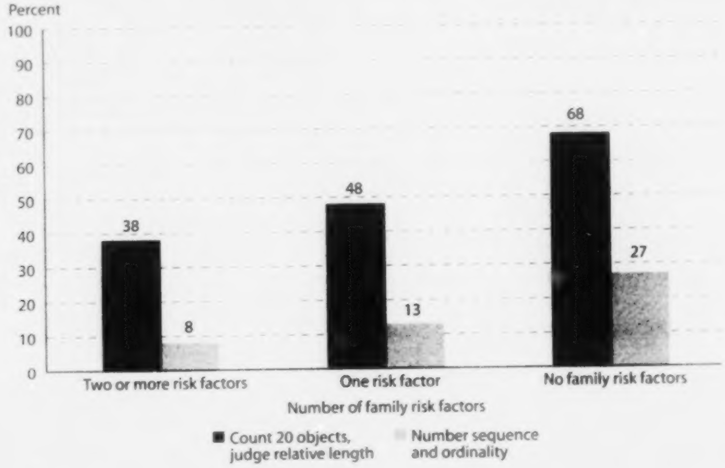
**Figure 12.—Percentage of first-time kindergartners with specific reading skills, by number of family risk factors: Fall 1998**



NOTE: Based on those assessed in English. Excludes 19 percent of Asian and 30 percent of Hispanic children. Detail may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

**Figure 13.—Percentage of first-time kindergartners with specific mathematics skills, by number of family risk factors: Fall 1998**



NOTE: Based on those assessed in English. Excludes 19 percent of Asian and 30 percent of Hispanic children.

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

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Continued

### Some children from high-risk families come to school with advanced skills

Although their numbers are comparatively small, some children from multiple risk families are able to overcome their disadvantage and perform at advanced levels from the start of kindergarten. About one child in 20 from the high risk group is two proficiency levels ahead of the typical kindergartner in reading (able to associate letters with sounds at the ends of words). A similar proportion is one level ahead of the typical pupil in mathematics (able to identify the ordinal position of an object in a series). One child in a hundred from the high risk group is advanced in reading or mathematics at school entry: he or she is reading sight words or doing addition and subtraction problems.

## ■ *How do risk factors affect noncognitive aspects of school readiness?*

The ECLS-K analyses revealed negative relationships between the risk factors and children's health, social development, and behavior. The more risk factors a child has, the greater the chances that the child is rated by parents as in less than very good health, exhibits classroom conduct problems, and displays less positive approaches to learning. However, not all aspects of children's health and growth are linked in detrimental ways to the risk factors.

### Risk factors are linked to poorer child health but not to impaired growth or coordination

Risk factors are generally associated with lower parent ratings of the child's health status and poorer performance on the assessment of fine motor development. Parents' ratings of child health reveal, for example:

- Whereas a majority of children from families with no risk factors (59 percent) are in excellent health, less than half of children from families with one risk factor (44 percent) or multiple risk factors (37 percent) are in comparable health (figure 14).
- Children are four to six times more likely to be described as in fair or poor health if they come from at-risk families than if they come from families with no risk factors.

The more risk factors a child has, the less likely that child is to display fine motor skills that are in the top third of the distribution (figure 15). On the direct assessment of skills involving an activity such as building a tower with blocks or copying designs with a pencil, for example:

- Twenty-six percent of children with multiple risk factors scored in the top third of the distribution on fine motor skills, compared with 30 percent of those with one risk factor, and 41 percent of those with no risk factors.
- Thirty-eight percent of children with multiple risks and 35 percent of children with a single risk factor scored in the lowest third of the distribution of fine motor skills. In contrast, 22 percent of children from families with none of the four risk factors did so. (Data not shown.)

Risk factors generally do not have negative associations with children's physical growth or gross motor development. The average height and weight of male kindergartners with a single family risk or even multiple risk factors are similar to the height and weight of boys from families with no risk factors (figure 16). However, females from families with one risk or multiple risks are, on average, one inch shorter and one pound heavier than females from families with no risk factors (figure 17). Children's performance on the assessment of gross motor development varies little with the number of family-risk factors (figure 15). However, the percentage of children in the lowest third of the distribution in gross motor performance is

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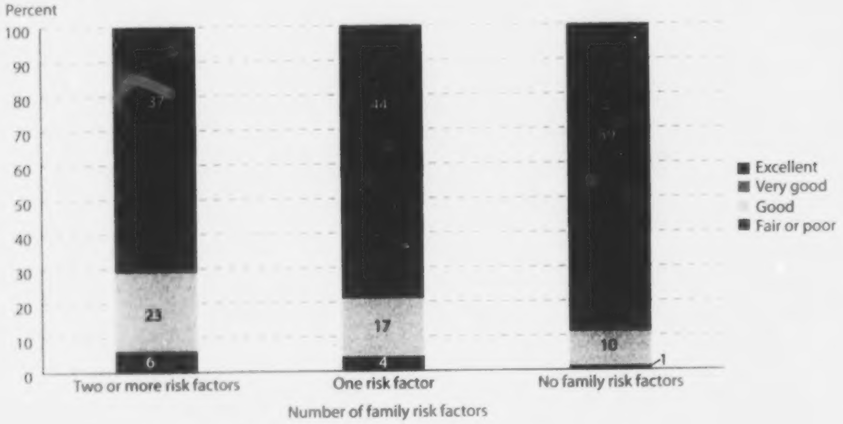
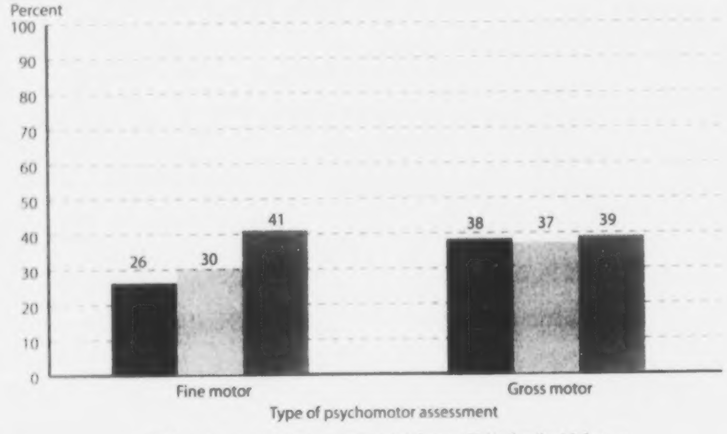
Figure 14.—Percentage distribution of parental ratings of first-time kindergartners' health status, by number of family risk factors: Fall 1998



SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

Figure 15.—Percentage of first-time kindergartners in top third of distribution on fine motor and gross motor development, by number of family risk factors: Fall 1998



SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

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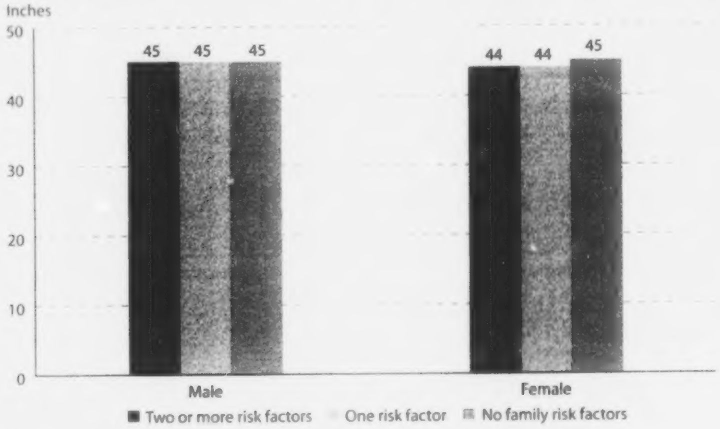
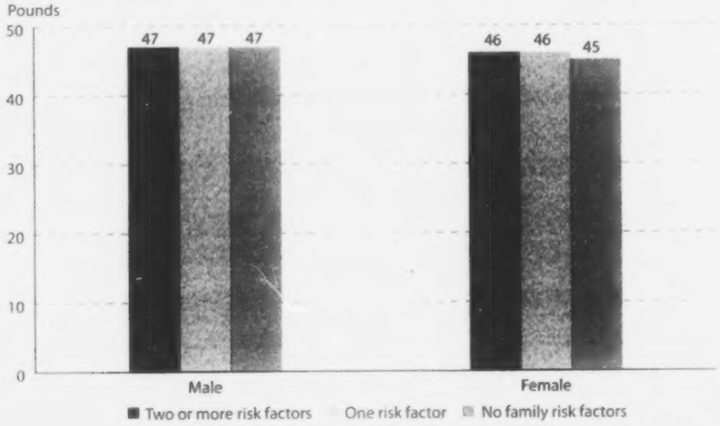
**Figure 16.—Mean height in inches of first-time kindergartners, by sex and number of family risk factors: Fall 1998**



SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998

**Figure 17.—Mean weight in pounds of first-time kindergartners, by sex and number of family risk factors: Fall 1998**



SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998 somewhat larger among children from families with one risk (29 percent) or multiple risks (28 percent) than among children from families with no risk factors (25 percent). (Data not shown.)

### At-risk children are less likely to be socially adept and more likely to be aggressive

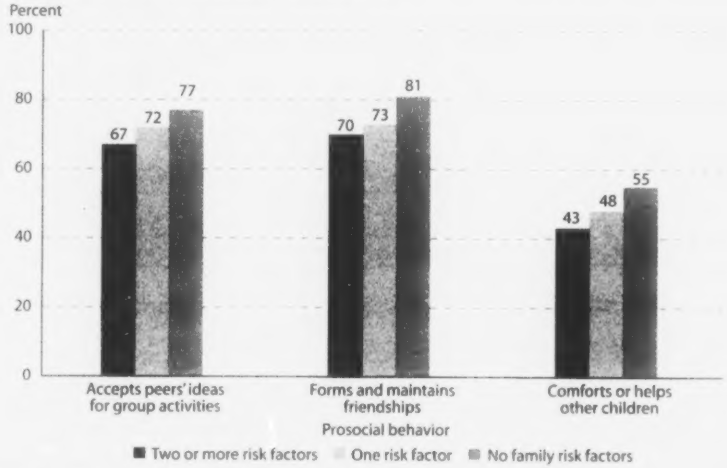
Teachers report that a majority of children from higher risk family environments make friends readily and accept peers' ideas. Nonetheless, the percentages of at-risk children who engage in these positive social behaviors are generally smaller than among children from lower risk family environments. According to teacher ratings, for example:

- Two-thirds of children from multiple-risk families and 72 percent of those from single risk families often accepted peers' ideas for group activities. In comparison, 77 percent of children from families with no risk factors did so (figure 18).
- Seventy percent of children from multiple-risk families and 73 percent of those from single-risk families often made and maintained friendships. The comparable proportion was 81 percent for children from no-risk families.
- No more than half of children from multiple-risk families (43 percent) or single-risk families (48 percent) often comforted or helped their classmates. In contrast, 55 percent of children from families with no risk factors displayed these behaviors.

According to teachers, a minority of children from higher risk family environments engage in angry or combative behavior often. The size of the minority is larger among at-risk children than among those from other family environments. According to teachers, for example:

- Twice as many children from multiple risk families (14 versus 7 percent of those from families with no risk factors) and about as

**Figure 18.—Percentage of first-time kindergartners described by teachers as engaging in selected prosocial behaviors often or very often, by number of family risk factors: Fall 1998**



SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998

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**Continued**

many from single-risk families (12 percent) often fight with their classmates (figure 19).

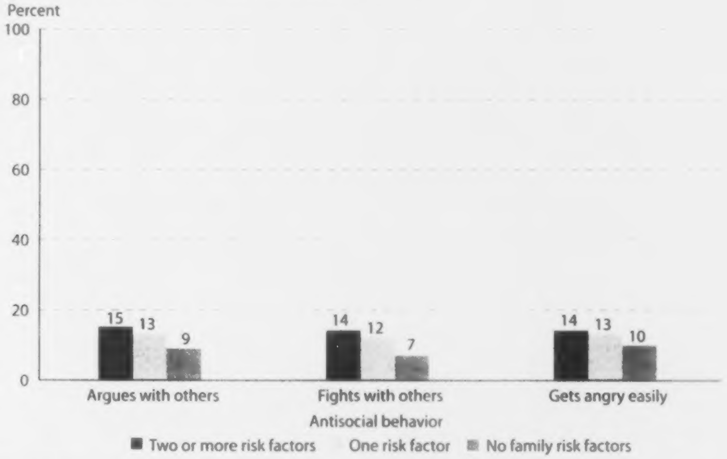
- Similar proportions of children from multiple risk and single risk families get angry easily (14 and 13 percent, respectively, versus 10 percent of those from families with no risk factors) and argue with others frequently (15 and 13 percent, respectively, versus 9 percent of the lower risk group).

### Fewer at-risk children have a positive approach to learning activities

Kindergarten teachers describe most at-risk kindergartners as exhibiting a positive approach to classroom learning activities. Even among those from multiple-risk families, majorities seem eager to learn new things, pay attention, and persist in learning tasks often or very often. Despite this evidence, the percentages who display these positive approaches to learning are considerably smaller than among children from families with no risk factors. Conversely, larger proportions of at-risk children display these positive approaches rarely or never. According to teacher ratings:

- Thirty-six percent of children from multiple risk families are eager to learn no more than "sometimes" or "never," compared with 20 percent of children from families with no risk factors. Children from single risk families fall in between, with 30 percent being described as being eager to learn "sometimes" or "never."
- Almost half of kindergartners from multiple risk families (44 percent) "sometimes" or "never" pay attention well. The comparable proportions are 39 percent of children from single-risk families and 28 percent of those from lower risk families.
- Thirty-eight percent of children from multiple risk families rarely persist in completing classroom tasks. In comparison, 33

**Figure 19.—Percentage of first-time kindergartners described by teachers as engaging in selected antisocial behaviors often or very often, by number of family risk factors: Fall 1998**

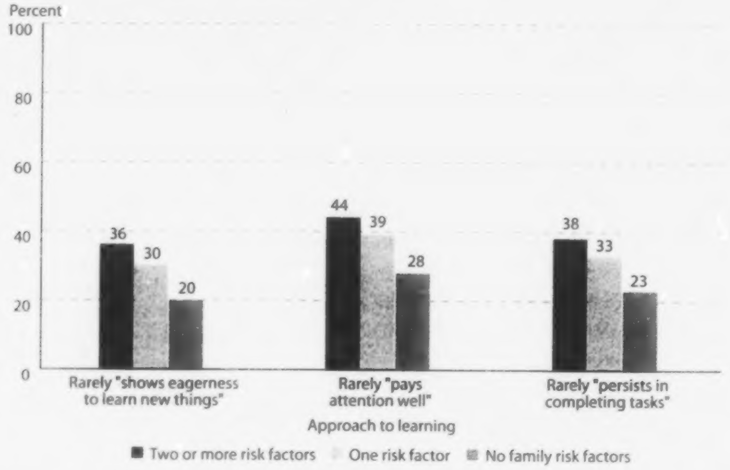


SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

## Entering Kindergarten

**Continued**

**Figure 20.—Percentage of first-time kindergartners described by teachers as engaging in positive approaches to learning sometimes or never, by number of family risk factors: Fall 1998**



SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

percent of children from single risk families and 23 percent from families with no risk factors rarely persist.

### Discussion

The Early Childhood Longitudinal Study, Kindergarten Class of 1998–99, provides a first-ever look at the knowledge, skills, health, and behavior of a nationally representative sample of U.S. kindergarten children upon entry to school. On the whole, the study provides a portrait of what today's American children are like when they begin school. While many of the results are positive, not all of the news is good. Parents report that substantial minorities of children are already experiencing risks for developmental difficulties, with one in five being described as overly active, one in six having problems concentrating for sustained periods, and one in nine not articulating words clearly or fluently. Teachers report that sizable minorities display less conducive approaches to learning tasks. One-quarter of beginning kindergartners are described as eager to learn no more than sometimes or never, and one-third as paying attention in class with similar frequency. The significance of these findings becomes clearer in light of earlier surveys on qualities that teachers and parents consider important for school readiness. Majorities of both teachers and parents rate a child's ability to sit still and pay attention in class as essential or very important for school readiness (West, Germino-Hausken, and Collins 1993). Most teachers also rate children's ability to communicate needs and wants to others as crucial for school success (Heaviside and Farris 1993).

The findings of the new study show considerable variation in children's knowledge and skills as they enter kindergarten. The variations in children's knowledge and skills are partly related to differences in how old children are when they begin school and to developmental

## Entering Kindergarten

**Continued**

differences between boys and girls. These variations are also associated with family risk factors, which, in turn, are related to some of the observed variation in children's health status and behavior at school entry.

### AGE DIFFERENCES

Children who are close to 6 or already 6 when they begin kindergarten have several advantages over children who start school when they have just turned 5 or are not yet 5 years old. In some ways, the findings regarding age-related differences in cognitive and noncognitive skills are consistent with what many parents and teachers already believe, namely that older children tend to be larger and more mature than younger children and that children learn much before they come to school. In addition, the findings lend some support to the contentions of policy analysts who have questioned the practice of allowing parents to withhold their children from kindergarten for a year, because it gives these children advantages over other children who enter at younger ages (Zill, Loomis, and West 1997). The critics argue that this practice places other younger children at a disadvantage because they are not as fully developed as the withheld child. Developmental disparities between older and younger children are compounded by the fact that better educated parents are more likely than less educated parents to delay their child's entrance to school (Meisels 1992). The ECLS-K results showed that first-year kindergartners who are already 6 have significantly fewer family-risk factors than younger groups, although they displayed a higher rate of some developmental difficulties as well.

### SEX DIFFERENCES

Female kindergartners come to school with reading skills that are slightly more advanced, on average, than those of males. They are also less likely to have developmental difficulties and are more likely to exhibit good social skills and classroom behavior. The higher frequency of behavior and adjustment problems that males exhibit when entering kindergarten foreshadows the greater number of males who experience conduct and disciplinary problems later in elementary and secondary school (Coiro, Zill, and Bloom 1994). Though some of the early problems may be transitory and simply reflect different developmental trajectories for boys and girls, others may be predictive of later and more serious disturbances. In contrast, despite the equivalent mathematics skills and general knowledge and better behavioral adjustment that females typically display at school entrance, females lag behind males in mathematics and science achievement in the later grades (NCES 1998). It is possible that this pattern is related to differences in development and social roles between the sexes that emerge as children reach adolescence. The longitudinal data on curriculum, instructional practices, and achievement that the ECLS-K will produce as it follows boys and girls through elementary school should be of value in exploring these questions.

### RISK FACTORS

Family risk factors that are associated with poor performance in school-aged children are also linked with lower proficiency in early reading and mathematics skills and general knowledge among children as they enter kindergarten. These risk factors are low maternal education, welfare dependency (as a marker of family poverty), having only one parent in the home, and having parents whose primary language is not English. As with previous studies (Zill et al. 1995), the ECLS-K data show that there is a cumulative effect of the number of risks to which a child is exposed early in life.

## Entering Kindergarten

**Continued**

While children with one risk factor do not fare as well as those with none, children who have two or more risk factors exhibit greater achievement lags, poorer health, more problem behavior, and less positive approaches to learning than do children with a single risk factor. Further examination of the data are required to reveal whether each risk factor is of approximately equal importance or whether some are more significant than others. Some researchers have theorized that the number of risk factors in a child's background may be more important than the nature of the particular risk or risks (Meisels and Wasik 1990). Others believe that low parental education or family income are far more significant than growing up in a single-parent family or having parents whose primary language is not English (Scott-Jones 1996). Multivariate analyses of the ECLS-K data should help evaluate these positions.

The results also show that the risk factors have no or relatively slight negative associations with children's physical growth or gross motor development. What these results suggest is that the health conditions affecting at-risk children are more apt to be developmental and emotional, rather than physical.

Many of the children with multiple risk factors have attended Head Start or prekindergarten programs. How does participation in these programs affect the early achievement and behavior of at-risk children? This is a question that remains to be investigated with the ECLS-K data and that can be better addressed by the companion birth cohort study to the ECLS-K. The results of such analyses will assist researchers and policymakers in determining whether such programs as Head Start and prekindergarten have their intended effects and what can be done to improve children's preparation for school.

Although many children from multiple-risk families lag behind their classmates in early academic skills, some can overcome the odds and perform at advanced levels when entering kindergarten. This finding seems to argue against stereotyping children from educationally disadvantaged families and assuming that they are all behind when they begin school. Education researchers can examine these children further to understand better the individual, family, and preschool program factors that are associated with such high performance in the face of adversity.

American children show considerable variation in skills and knowledge as they enter kindergarten. The ECLS-K results demonstrate that children are neither alike at school entry, nor ready to be stretched and molded by the varying qualities and demands of different kindergarten programs. In other words, for kindergartners, one size does not fit all. How do kindergarten programs and teachers meet the instructional needs of children whose skills far exceed or greatly lag behind those of the average child? The ECLS-K data will provide a rich and detailed profile of the progress of groups of children who enter kindergarten at different levels.

It is common to attribute the achievement difficulties that educationally disadvantaged children experience in elementary and secondary school to the inferior schools that they are required to attend (e.g., Kozol 1991). What the ECLS-K shows is that these difficulties cannot be attributed solely to bad schools: many children are already behind when they open the classroom door. Does kindergarten help disadvantaged children catch up to other children? If so, does it do so at the expense of children who come to school with more advanced skills? Do the advanced children just mark time while the class reviews things that they already know?

# Entering Kindergarten

**Continued**

Or are kindergarten teachers able to work effectively with children at different skill levels? These are important questions that researchers will address with data from future rounds of the ECLS-K.

## NOTES

[1] Westat is implementing the ECLS-K for the U.S. Department of Education's National Center for Education Statistics.

[2] These children were included in the rest of the study (and data from them are included in the noncognitive assessment results presented below).

[3] The kindergarten pupils described throughout this essay are those who are in their first year of kindergarten.

# Entering Kindergarten

Continued

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# Section I
# *Participation in Education*

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Long
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# Summary: Participation in Education

Many educational opportunities are available to children and adults in the United States. Preprimary education prepares young children socially and academically for first grade; elementary and secondary education provide skills that prepare young people to become productive members of society; and postsecondary education provides opportunities for individuals to gain advanced knowledge and skills either immediately after high school or later in life. In addition, many adults participate in learning activities to upgrade work-related skills, change their careers, or expand their personal interests.

The effects of formal education are related to the degree of participation, as shown in studies of returns to education (*Indicator 23*), participation in civic activities (*Indicator 22*), and even personal health (NCES 93–290). Thus, the extent to which individuals and groups have access to educational opportunities and how they progress through various levels is important to monitor.

Participation in education changes as a result of both fluctuations in population and rates of enrollment in a population group. These changes in enrollment can affect the resources, such as qualified teachers, physical facilities, and funding levels, required to provide a quality education for the Nation's students. In addition, differences in enrollments among racial-ethnic or family income groups can provide insight into inequality of access and participation, areas that are of concern for many educational reform efforts.

### EARLY CHILDHOOD PROGRAMS

Participation in early childhood programs, such as nursery school, prekindergarten, Head Start, or kindergarten, can help prepare children to enter first grade. Enrollment rates in such preprimary programs rose from 38 percent of the population ages 3–5 in 1970 to 65 percent in 1998 (*Indicator 1*). This increase may be attributed to a combination of factors, including increases in both the percentage of working mothers and funding for child care from public and private sources (Goodman 1995).

Rates of enrollment in preprimary education programs vary by the child's age, race-ethnicity, and family poverty level. In 1999, 46 percent of 3-year-olds, 70 percent of 4-year-olds, and 93 percent of 5-year-olds were enrolled in preprimary education programs. Black children ages 3, 4, or 5 were more likely than their white or Hispanic peers to be enrolled in preprimary education. Poverty was a factor in rates of enrollment for white children, with poor white children ages 3 or 4 less likely to be enrolled than their counterparts who were nonpoor (*Indicator 2*).

### ELEMENTARY AND SECONDARY SCHOOL ENROLLMENT

Since enrollment at the elementary and secondary levels is mandatory, changes in enrollment are driven by changes in the size of the school-age population. This school-age population size fluctuates due to changes in birth rates, immigration, and other factors. In the aftermath of the baby boom era, for example, total enrollments declined in the 1970s and early 1980s but have increased since then as a result of the "baby boom echo" (NCES 98–039). Enrollments in public elementary and secondary schools reached 43.2 million in 1999. Projections through 2009 suggest that enrollments for grades 1–8 will decrease slightly, but enrollments for grades 9–12 will increase by an estimated 1.2 million students (*Indicator 3*).

Growth in elementary and secondary school enrollments will not be uniform across regions of the country. Public schools in the Midwest and Northeast will experience decreases in their share of total enrollment in the next decade, while schools in the South and West will expe-

# Summary: Participation in Education

rience increases (see *Indicator 3*). In addition to facing an all-time high in student enrollment, schools in the West serve an increasingly heterogeneous student body. Between 1972 and 1998, for example, the percentage of students in the West who were Hispanic rose from 15 to 30 percent of the total. In 1998, 48 percent of students in public elementary and secondary schools in the West were minority students (*Indicator 4*).

### ENROLLMENTS IN POSTSECONDARY EDUCATION

Because postsecondary education is voluntary, changes in total enrollments reflect changes in population size, enrollment rates, and the perceived availability and value of higher education. Total postsecondary enrollments for adults ages 18–24 generally increased over the past three decades as a result of population increases in the 1970s and higher rates of enrollment in the 1980s and 1990s (*Indicator 1*). These recent increases in enrollment may be associated with the rising importance of postsecondary education in the job market. Over the next decade, the strongest job growth is expected to be for occupations requiring at least an associate's degree (Braddock 1999). Enrollments in higher education are also projected to continue to increase in the next decade (*Indicator 7*).

Projections for the next decade suggest that changes in enrollments will not be uniform for all groups. Full-time enrollments are expected to increase at least three times as fast as part-time enrollments; while enrollments at 4-year institutions are expected to grow at least one and one-half times as fast as enrollments at 2-year institutions. The enrollments of women, which now exceed those of men, are projected to continue to grow at a somewhat faster rate than the enrollments of men (*Indicator 7*). During the past two decades, higher education, like elementary and secondary education, has become increasingly heterogeneous. Minority enrollments at the undergraduate level increased at all types of institutions over the past 20 years. By 1995–96, the last year for which data are available, minority enrollments represented 26 percent of all enrollments. Much of this change is due to the increased enrollment of Asian/Pacific Islander and Hispanic students (*Indicator 8*).

### PARTICIPATION IN ADULT LEARNING

During the past decade, the rate of participation in adult education increased. The total proportion of adults ages 18 and older who participated in adult education in the previous 12 months increased from 38 percent to 50 percent between 1991 and 1999. Most of the enrollments in adult learning occur outside the formal education system, particularly among older adults (*Indicator 10*).

### CONCLUSIONS

Education plays an increasing role in people's lives. Enrollment rates have increased for people not already in mandatory educational programs; nonetheless, growth has not been uniform, and some differences remain. Although preprimary enrollments have been increasing, not all groups are well represented, especially white children in poverty. For elementary and secondary schools, one of the largest increases in the number and diversity of students has occurred, and is projected to continue to occur, in the West. In institutions of higher education growth is expected to continue in the next decade, but not for all types of institutions or groups. Four-year institutions and full-time programs will experience these increases to a greater extent. While adult education has experienced growth across different age, sex, and racial-ethnic groups, the gap between men and women in postsecondary education is expected to increase favoring women.

# All Ages

## Educational Enrollment Rates, by Age

*The largest increases in the percentage of the population enrolled in school since 1970 have been in preprimary education among 3- to 5-year-olds and in higher education institutions among 18- to 24-year-olds.*

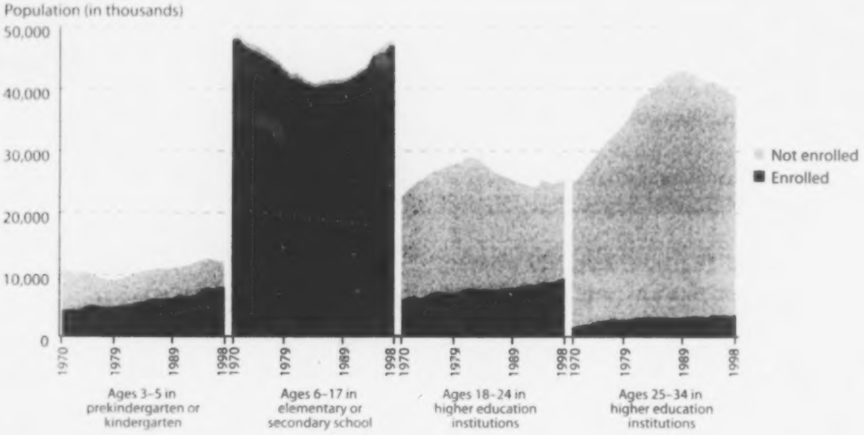
Changes in total enrollments have implications for the demand for educational resources. Enrollments change due to fluctuations in population size and rates of enrollment. A shift in the rate of enrollment implies a change in the enrollment behavior of the population, which, in turn, may reflect changes in the perceived value of formal education or the time taken to complete degrees.

Between 1970 and 1998, enrollment rates for 3- to 5-year-olds in prekindergarten and kindergarten increased more than those for any other age group, rising from 38 to 65 percent (see supplemental table 1-1). In the 1970s, there was a decrease in the population of 3- to 5-year-olds, but the population growth of the 1980s and 1990s helped total enrollment increase.

Total enrollments for 6- to 17-year-olds in elementary and secondary education declined in the 1970s, but increased in the 1990s due to changes in the population. During this period, enrollment rates were stable at about 98 percent (see supplemental table 1-1).

In the 1970s, the number of 18- to 24-year-olds enrolled in higher education institutions taking classes for credit grew due to a population increase. In the 1980s, growth in total enrollments was a result of an increase in enrollment rates, from 26 percent in 1980 to 31 percent in 1989 (see supplemental table 1-1). Also, increased enrollment rates partly explained enrollment growth in the 1990s. For 25- to 34-year-old students, rates of enrollment were lower and increased at a slower pace since 1980 than for 18- to 24-year-olds.

**EDUCATION ENROLLMENT: Number of enrolled and not enrolled people ages 3 to 34 years old, by level: October 1970–98**



NOTE: Prekindergarten includes only nursery schools. "Higher education" includes regular programs in 2- and 4-year colleges and universities. Comparable data were not available for children ages 3 and 4 in 1990 due to changes in survey procedures. In 1994, the survey methodology for the Current Population Survey (CPS) was changed and weights were adjusted. Enrollment estimates exclude the following: children ages 3–5 enrolled in elementary school or higher; children ages 6–17 enrolled in prekindergarten, kindergarten, or higher education institutions; and adults ages 18–34 enrolled in school below the higher education institution level. These groups are included in the estimates for "not enrolled."

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys, 1970–98.

FOR MORE INFORMATION

Supplemental Note 1

Supplemental Tables 1-1, 1-2

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# Preprimary Education

## Enrollment in Preprimary Education

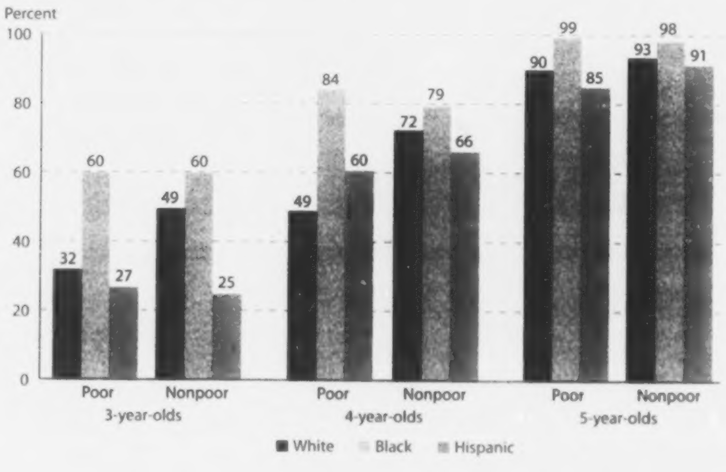
*Preprimary enrollment rates for 4- and 5-year-olds were higher in 1999 than in 1991. Black children enrolled in preprimary education at higher rates than white and Hispanic children. Enrollment rates for black children in poverty generally exceeded those of white and Hispanic children in poverty.*

Participating in preprimary education programs such as Head Start, nursery school, prekindergarten, and kindergarten can help a child prepare for school. In 1999, 70 percent of 4-year-olds and 93 percent of 5-year-olds were enrolled in preprimary education, up from 62 and 90 percent, respectively, in 1991. Enrollment rates for 3-year-olds were similar in 1991 and 1999 (43 and 46 percent, respectively) (see supplemental table 2-1). In 1999, younger children enrolled in preprimary education were concentrated in center-based programs, while 5-year-olds were mostly enrolled in kindergarten.

In 1999, black children were more likely to be enrolled in preprimary education than white or Hispanic children. For example, 60 percent of black 3-year-olds were enrolled in center-based programs or kindergarten, compared with 47 and 26 percent of whites and Hispanics, respectively (see supplemental table 2-1). Black 3- and 4-year-olds in poverty were also more likely to be enrolled in preprimary education than their white and Hispanic peers. Poor and nonpoor blacks had similar enrollment rates, as did poor and nonpoor Hispanics. In contrast, poor white 3- and 4-year-olds were less likely to be enrolled than nonpoor white children in this age group.

Other factors associated with children's enrollment in preprimary education are parents' highest level of education and household income. As parents' education increases, so do their children's enrollment rates in preprimary education. In addition, children in households with an annual income of more than $50,000 are generally more likely to be enrolled in preprimary education than children in households with lower annual incomes (see supplemental tables 2-1 and 2-2).

**ENROLLMENT IN PREPRIMARY EDUCATION: Percentage of 3-, 4-, and 5-year-olds enrolled in center-based programs or kindergarten, by race-ethnicity and poverty status: 1999**



NOTE: This analysis includes children ages 3–5 who were not enrolled in first grade. See the glossary for definitions of center-based programs and kindergarten. Age is as of December 31, 1998. The poverty measure combines information about household income and household size.

SOURCE: U.S. Department of Education, NCES, National Household Education Survey (NHES), 1999 (Parent Interview Component).

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FOR MORE INFORMATION:
Supplemental Notes 2, 3
Supplemental Tables 2-1, 2-2

# Elementary/Secondary Education

## Past and Projected Elementary and Secondary School Enrollment

*Public elementary and secondary school enrollment is projected to reach 43.5 million in 2000, and to increase further in subsequent years. The West will experience the majority of this growth in the student population.*

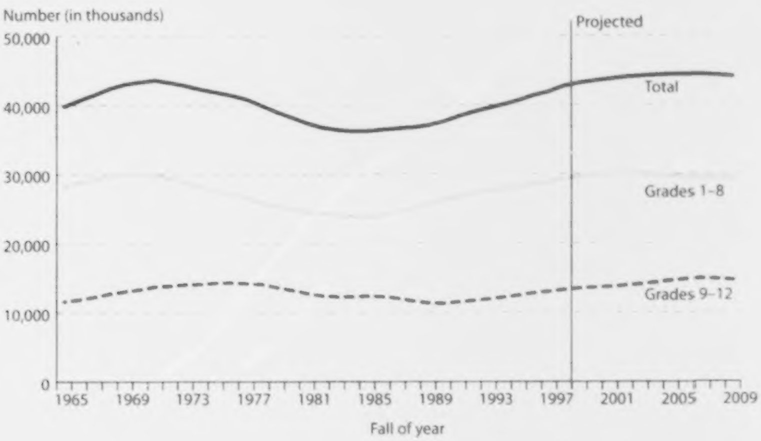
The baby boom echo, the 25 percent increase in the Nation's birthrate that began in the mid-1970s and peaked in 1990, and rising immigration have increased school enrollment. Growing enrollments, in turn, increase the need for new schools, qualified teachers, and money to fund education.

After declining during the 1970s and early 1980s, public school enrollment for grades 1–12 increased during the latter part of the 1980s and the 1990s, reaching 43.2 million in 1999. It is projected to be 43.5 million in fall 2000. Public enrollment for grades 1–12 is projected to continue increasing through the first half of this decade to an all-time high of 44.4 million students in 2006, and then to begin declining slightly. Between 1999 and 2009, enrollment in grades 1–8 is projected to decrease slightly, whereas enrollment in grades 9–12 is projected to increase about 9 percent. Between 1999 and 2009, public enrollment in grades 1–12 is expected to decrease in the Northeast and Midwest, and to increase in the South and West (see supplemental tables 3-1 and 3-2).

The regional distribution of students in public schools has changed since the 1970s, with a large increase in the total share of enrollment occurring in the West. Declining shares of enrollment for the Northeast and Midwest are projected through 2009, whereas increases are expected for the West and South. These changes coincide with increased population growth in the West and South compared with other regions.

Private school enrollment for grades 1–12 was higher in 1997–98 than in 1989–90. Between these years, private school enrollment increased in both the South and West, remained similar in the Midwest, and decreased in the Northeast. Despite increases in enrollment in the West, private enrollment for grades 1–12 was lowest in the West and highest in the South in 1997–98 (see supplemental table 3-3).

**SCHOOL ENROLLMENT: Public elementary and secondary school enrollment, by grade level: Fall 1965–2009**



SOURCE: U.S. Department of Education, NCES, Common Core of Data, various years, and *Projections of Education Statistics to 2009* (NCES 1999-038), 1999.

FOR MORE INFORMATION:
Supplemental Note 4
Supplemental Tables 3-1, 3-2, 3-3
U.S. Department of Education 1999

# Elementary/Secondary Education

## Racial-Ethnic Distribution of Public School Students

*Hispanic students are the fastest growing student group in the Nation's elementary and secondary schools.*

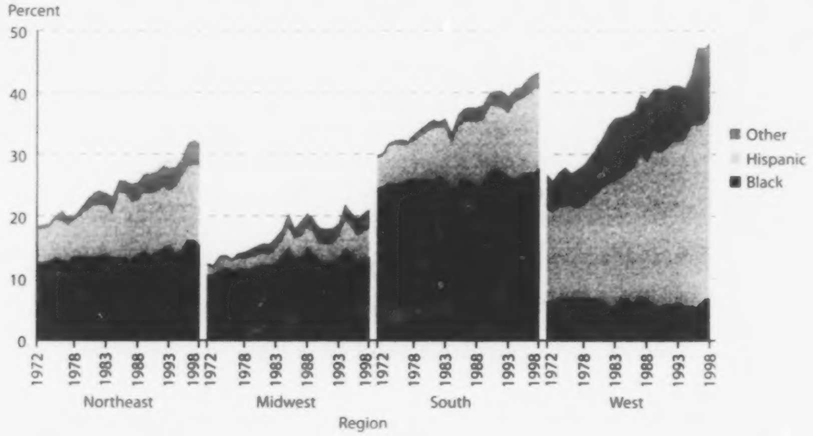
Changes in the racial-ethnic composition of student enrollments can alter the amount of diversity of language and culture in the Nation's schools. Although variety in student backgrounds can enhance the learning environment, it can also create new or increased challenges for schools to accommodate the needs of a wide variety of students. Knowledge of these shifts in the racial-ethnic distribution of public school students in grades 1–12 may help schools plan for this change.

In 1998, 37 percent of public school students enrolled in these grades were considered to be part of a minority group, an increase of 15 percentage points from 1972. This increase was largely due to the growth in the proportion of students who were Hispanic. In 1998, black and Hispanic students accounted for 17 and 15 percent of the public school enrollment, up 2 and 9 percentage points, respectively, from 1972. The percentage of students from other racial-ethnic groups also increased, from 1 percent in 1972 to 5 percent in 1998 (see supplemental table 4-1).

Although minority students made up almost 40 percent of the total public school population in 1998, their enrollment differed by region. In 1998, the largest concentration of minority students was in the West, where 48 percent of students in public elementary and secondary schools were minority. The Midwest had the lowest proportion of minority students (21 percent) (see supplemental table 4-2).

Among all public school students in 1998, the proportion of students in the South who were black (28 percent) was higher than the proportion who were black in other regions (7 to 15 percent). In the West, Hispanic students accounted for 30 percent of the student body (up from 15 percent in 1972). In contrast, in 1998, Hispanic students represented 5 percent of all students in public elementary and secondary schools in the Midwest (see supplemental table 4-2).

**ENROLLMENT: Percentage of public school students enrolled in grades 1–12 who were minorities, by region: October 1972 –98**



NOTE: Data not available for 1979 and 1980. In 1994, the methodology for the Current Population Survey (CPS) was changed and weights were adjusted.

SOURCE: U.S. Department of Commerce, Bureau of the Census. October Current Population Surveys, 1972–98.

FOR MORE INFORMATION
Supplemental Notes 1, 3, 4
Supplemental Tables 4-1, 4-2

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# Elementary/Secondary Education

## Parental Education, by Race-Ethnicity

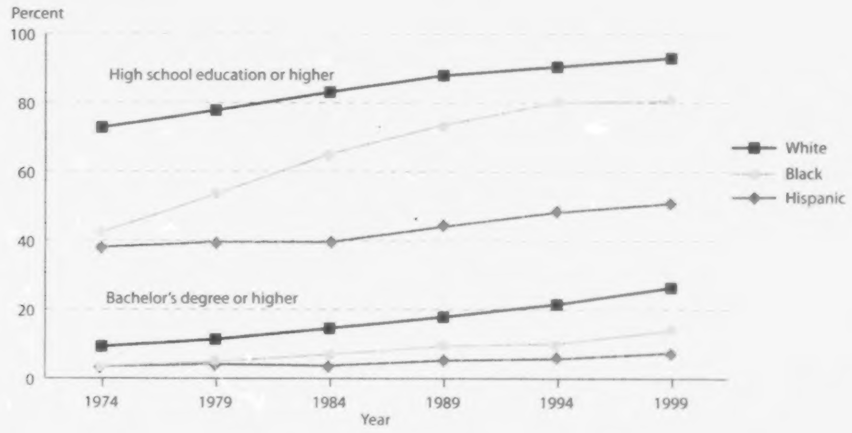
***The gap in the percentages of white and black children whose parents have at least a high school education narrowed over the past 25 years.***

Parents' educational attainment is related to student achievement and other dimensions of educational participation and outcomes (Grissmer et al. 1994). In 1999, a higher percentage of white children compared with black and Hispanic children ages 6–18 had parents who had attained at least a high school education. The same is true for the percentage who had attained at least a bachelor's degree.

Between 1974 and 1999, the percentage of children ages 6–18 whose parents had at least a high school education increased among all racial-ethnic groups. However, the rates of increase differed by racial-ethnic groups. While fewer black children ages 6–18 had parents who completed at least a high school education compared with their white peers, the attainment gap between the percentage of white and black children whose parents attained this level of education narrowed considerably between 1974 and 1999. This large reduction in the gap was due to a large increase in the percentage of black children with parents who attained at least a high school education compared with their white peers. In contrast, the gap between the percentages of white and Hispanic children whose mothers attained at least a high school education did not change, while the gap between the percentages of white and Hispanic children whose fathers attained this level of education increased (see supplemental table 5-1).

Patterns in the bachelor's degree attainment of parents are different from those in high school attainment. Although more black and Hispanic 6- to 18-year-olds had mothers who had attained at least a bachelor's degree in 1999 than in 1974, the gap in the percentages of white and black and white and Hispanic 6- to 18-year-olds whose parents had at least a bachelor's degree increased in the past 25 years, with the exception of the gap between the fathers of black and white children, which did not change (see supplemental table 5-1).

**PARENTAL EDUCATION: Percentage of 6- to 18-year-olds with mothers who completed at least high school or a bachelor's degree or more: 1974–99**



NOTE: The Current Population Survey (CPS) questions used to obtain educational attainment were changed in 1992. In 1994, the survey methodology for the CPS was changed and weights were adjusted. Information on parents' educational attainment is available only for those parents who live in the same household with their child.

SOURCE: U.S. Department of Commerce, Bureau of the Census. March Current Population Surveys, various years.

FOR MORE INFORMATION
Supplemental Notes 1, 3
Supplemental Table 5-1
Grissmer et al. 1994

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# Elementary/Secondary Education

## Language Spoken at Home by Hispanic Students

*Hispanic students whose mothers were born outside the United States were more likely to speak mostly Spanish at home than their peers whose mothers were U.S.-born. These Hispanic students of foreign-born mothers were less likely to speak mostly Spanish at home if they were in the higher grades.*

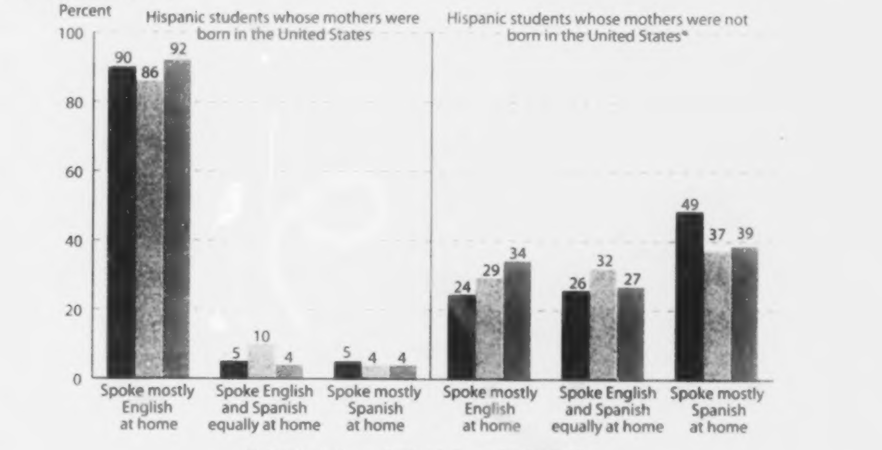
One of the challenges currently facing many schools is providing equal educational opportunities to students from various cultural backgrounds, including those who are not proficient in English. In 1999, 14 percent of all students enrolled in grades K–12 were Hispanic students (see supplemental table 6-1). Many Hispanics speak Spanish, and many Spanish speakers report being limited English proficient (NCES 98-013). Information on the language and demographic backgrounds of Hispanic students may help schools develop programs to address the needs of these students.

In 1999, 57 percent of Hispanic students in grades K–12 spoke mostly English at home, 25 percent spoke mostly Spanish, and 17 percent spoke English and Spanish equally (see supplemental table 6-2). Hispanic students who were enrolled in grades K–5 were more likely than those enrolled in higher grades (6–8 or 9–12) to speak mostly Spanish at home (28 versus 21 and 22 percent, respectively).

While over half of Hispanic students spoke mostly English at home, language usage varied according to their mothers' place of birth. Nearly 90 percent of the students whose mothers were born in the United States spoke mostly English at home, while 28 percent of the students whose mothers were not U.S.-born did so (see supplemental table 6-3). Among students whose mothers were born outside the United States, those enrolled in higher grades (6–8 or 9–12) were less likely to speak mostly Spanish at home than their peers in grades K–5.

Hispanic students who spoke mostly Spanish at home had parents who had less education than those who spoke mostly English at home. For example, 49 percent of Hispanic students who spoke mostly Spanish at home had parents with a high school education or higher, compared with 83 percent who spoke mostly English at home (see supplemental table 6-4).

**LANGUAGE SPOKEN AT HOME: Percentage of Hispanic students who spoke English or Spanish at home, by mother's place of birth and grade level: 1999**



* Information is not available for Hispanic students who did not live with their mothers.

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Parent Interview Component).

FOR MORE INFORMATION
Supplemental Notes 2, 3
Supplemental Tables 6-1, 6-2, 6-3, 6-4
NCES 1998–013

# Undergraduate Education

## Past and Projected Postsecondary Enrollments

***Although part-time and 2-year enrollments displayed more rapid growth in the 1970s, future growth is expected to be greater in full-time and 4-year enrollments. Women's enrollment is expected to continue increasing faster than that of men.***

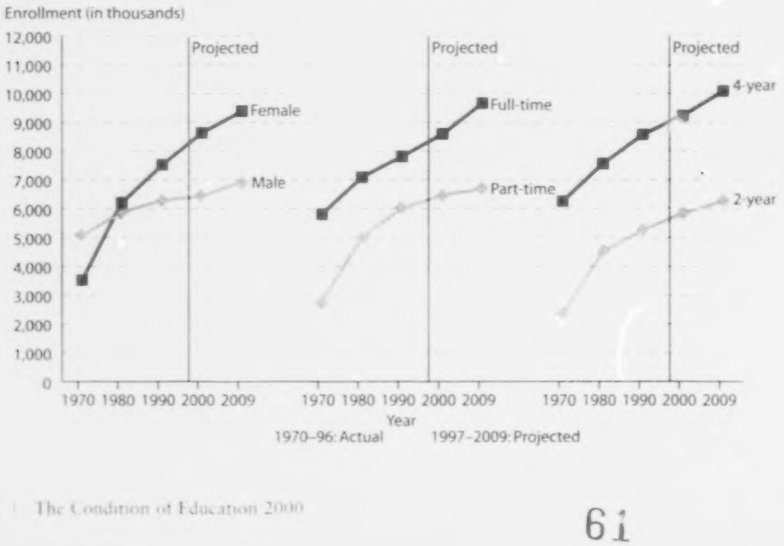
Total enrollments in degree-granting 2- and 4-year postsecondary institutions generally increased in the past three decades and are projected to increase into the next decade. These increases in enrollment have been accompanied by changes in the enrollment status of students, the type of institution attended, and the proportion of enrolled students who are women.

In the past, more students who enrolled in degree-granting 2- and 4-year postsecondary institutions were enrolled full time than part time, a pattern that is expected to continue in the future. In the 1970s, part-time enrollment increased at a faster rate than did full-time enrollment, but the majority of students were still enrolled full time. Although growth during the 1980s and 1990s was similar for both groups, the rate of growth for full-time enrollment in the next decade is expected to increase at least three and-one-half times the rate of part-time enrollment (see supplemental table 7-1).

More students attend 4-year institutions than 2-year institutions. After strong growth in the 1970s, the rate of increase in 2-year enrollment slowed and is expected to grow at about the same rate in the next decade. Four-year enrollment has consistently increased over the past three decades and is expected to increase at a rate at least one and a-half times the rate of 2-year enrollment in the next decade (see supplemental table 7-1).

The total number of women enrolled in degree-granting 2- and 4-year postsecondary institutions exceeded the number of men enrolled by 1980. Since the 1970s, women's enrollment has increased faster than men's, which varied in the 1980s and 1990s. Men's enrollment is projected to increase in the next decade, but women's enrollment is projected to grow at a faster rate. As a result, the number and proportion of students in higher education who are women are projected to reach new highs in the next decade.

**POSTSECONDARY ENROLLMENT: Total enrollment in degree-granting 2- and 4-year postsecondary education institutions, with projections, by sex, enrollment status and level: Fall 1970–2009**



SOURCE: U.S. Department of Education, NCES, *Digest of Education Statistics 1998* (NCES 1999-036), 1999, and *Projections of Education Statistics to 2009* (NCES 1999–038), 1999.

FOR MORE INFORMATION:
Supplemental Note 1
Supplemental Table 7-1

# Undergraduate Education

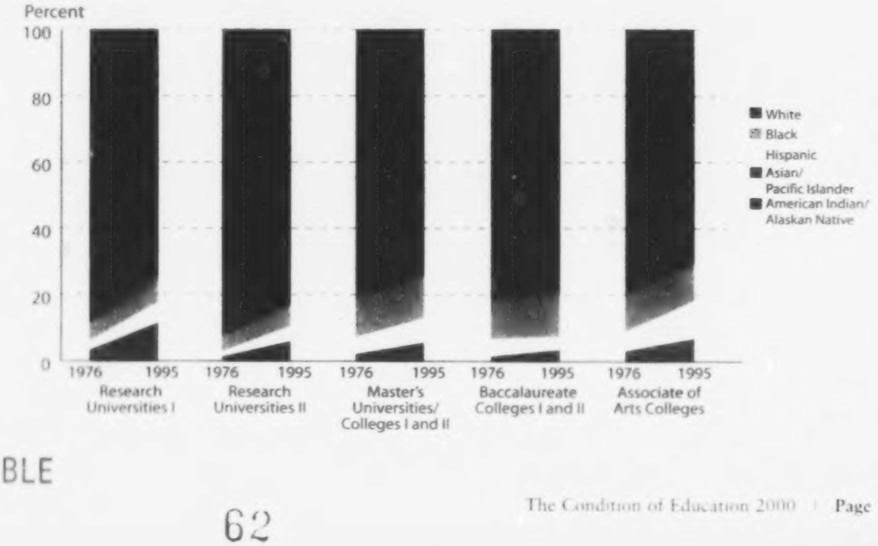
## Undergraduate Enrollment of Minority Students

*Minority enrollments at the undergraduate level have increased at all types of institutions in the past 20 years. In fall 1995, the percentages of minority student enrollments were highest within Associate of Arts Colleges among all types of higher education institutions.*

The student body at the Nation's colleges and universities has become increasingly heterogeneous since 1976. Excluding nonresident aliens, minority enrollments increased from 17 percent of all undergraduate students in fall 1976 to 26 percent in fall 1995. This rise was primarily due to the increased enrollment of Asian/Pacific Islander and Hispanic students. The enrollment for both groups increased by 4 percentage points between fall 1976 and fall 1995. In fall 1976, blacks accounted for 10 percent of undergraduate enrollments; Hispanics, 5 percent; Asians/Pacific Islanders, 2 percent; and American Indians/Alaskan Natives, 1 percent. In fall 1995, black undergraduates accounted for 11 percent of the total enrollment at colleges and universities. Hispanics represented 8 percent of enrolled undergraduate students; Asians/Pacific Islanders, 6 percent; and American Indians/Alaskan Natives, 1 percent (see supplemental table 8-1).

Enrollments within the various types of institutions varied according to the student's race-ethnicity. In fall 1995, Asians/Pacific Islanders constituted the largest proportion of minority students at Research Universities I, with 11 percent of the undergraduate enrollment. At Associate of Arts Colleges, black and Hispanic students, each with at least 11 percent of total enrollment, had the highest proportion of enrollment compared with other minority groups. At the remaining institutional types, blacks had a higher proportion of enrollments than did all other minority groups. Overall, minority students represented a greater porportion of the student body at the Associate of Arts Colleges and a smaller proportion at Research Universities II (29 versus 17 percent) (see supplemental table 8-1).

**UNDERGRADUATE ENROLLMENT: Percentage distribution of undergraduate enrollment in postsecondary education institutions, by race-ethnicity: Fall 1976 and fall 1995**



NOTE: For 1976–77 data students whose race-ethnicity was unknown were excluded from the analysis. Percentages may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, NCES. 1976 Higher Education General Information Survey (HEGIS) and 1995 Integrated Postsecondary Education Data System (IPEDS), "Fall Enrollment" surveys.

FOR MORE INFORMATION:
Supplemental Notes 1, 4, [illegible]
Supplemental table 8-1

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# Graduate and Professional Education

## Graduate/Professional Enrollment and Employment

*Graduate and first-professional students in different degree programs combine school and work in very different ways.*

Graduate and first-professional programs form an important segment of higher education, with 2.8 million students enrolled during the 1995–96 academic year. Just over half of them (56 percent) were enrolled in master's degree programs. Another 12 percent each were enrolled in doctoral and first-professional degree programs, and the remaining 20 percent in postbaccalaureate certificate or nondegree programs (NCES 98-083). Attendance patterns and focus on school or work as the primary activity varied considerably with level and specific degree program.

Graduate study at the master's level is primarily a part-time activity. Most students enrolled less than full time for the full year and worked while enrolled (many full time). Among MBA and education master's students who worked, most considered themselves primarily employees rather than students (85 and 75 percent, respectively). Students in other master's-level programs were just as likely to work, but more likely to consider themselves primarily students (57 percent).

About half of Ph.D. students enrolled full time for the full year. Although the majority of all Ph.D. students worked while enrolled, 80 percent of those who worked nevertheless considered themselves primarily students. The pattern for Ed.D. students was different. Relatively few Ed.D. students enrolled full time, full year (16 percent), and most of those who worked considered themselves primarily employees (82 percent).

Students in law or medicine were much more likely than master's or doctoral students to enroll full time, full year and less likely to work while enrolled. When they did work, most considered themselves primarily students.

**ENROLLMENT AND EMPLOYMENT: Percentage distribution of graduate and first-professional students according to selected enrollment and employment characteristics: Academic year 1995–96**

| Enrollment and employment characteristics | M.B.A. | M.A.T., M.Ed., M.A./M.S. in education | M.A./M.S. (except education) | Ph.D. | Ed.D. | M.D. | Law (LL.B. or J.D.) |
|---|---|---|---|---|---|---|---|
| **Total** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** |
| Attendance pattern | | | | | | | |
| Full-time, full-year[1] | 24.0 | 15.9 | 27.8 | 51.3 | 15.7 | 92.7 | 77.4 |
| Part-time, full-year | 46.7 | 45.0 | 39.5 | 36.3 | 49.3 | 1.6 | 14.3 |
| Other | 29.3 | 39.1 | 32.7 | 12.4 | 35.0 | 5.5 | 8.3 |
| Employment status[2] | | | | | | | |
| Worked at all | 87.2 | 85.9 | 83.2 | 75.7 | 97.5 | 30.8 | 56.1 |
| Worked full time if worked | 76.3 | 67.3 | 47.5 | 32.3 | 82.6 | 15.0 | 16.9 |
| Primary role if working | | | | | | | |
| Student meeting expenses | 15.1 | 25.0 | 57.1 | 80.0 | 17.7 | 87.5 | 82.5 |
| Employee enrolled in school | 84.9 | 75.0 | 42.9 | 20.0 | 82.3 | 12.5 | 17.5 |

[1] Excluding summer.

[2] Research assistantships are considered employment. Full-time employment is 35 hours or more per week.

NOTE: Percentages may not add to 100.0 due to rounding.

SOURCE: U.S. Department of Education, NCES, National Postsecondary Student Aid Study (NPSAS: 1996), Graduate Data Analysis System.

FOR MORE INFORMATION:
NCES 98-083

# Adult Learning

## Participation in Adult Learning

*Participation in adult learning was higher in 1999 than in 1991. Younger adults tended to participate in credential programs, whereas older adults were more likely to participate in other types of activities.*

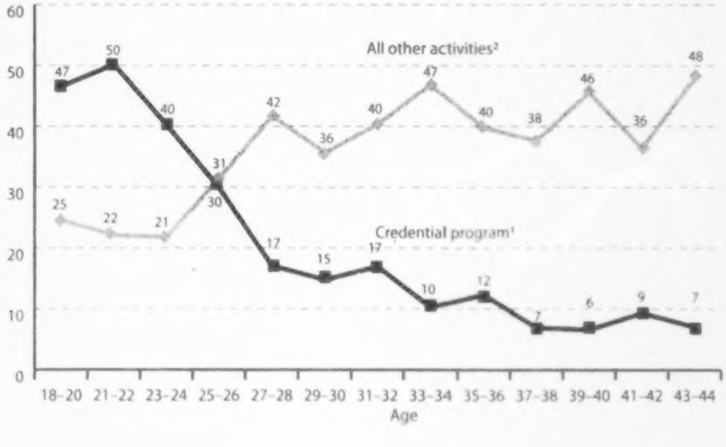
In an age of rapid technological and economic change, lifelong learning can provide benefits for individuals and for society as a whole. Participation in learning activities increased from 38 percent of those in the population age 18 or older in 1991 to 50 percent in 1999 (see supplemental table 10-1). These learning activities included participation in credential programs in a postsecondary institution or some other kind of organization, work-related learning other than a credential program, basic skills training, learning English as a Second Language, apprenticeships, and learning for purposes of personal development.

For those ages 18–44, participation in credential programs leading to a college degree, diploma, or certificate from a postsecondary institution generally decreases with age, while participation in all other kinds of adult learning activities increases with age. At ages 21–22, 50 percent of the population participated in a postsecondary credential program[1] compared with 22 percent in all other types of adult learning activities in 1999. At ages 43–44, 7 percent of adults participated in credential programs in postsecondary institutions, and 48 percent participated in other types of learning activities.

The most common provider varied, depending on the type of learning activity in which the adult engaged. In 1999, among those who participated in credential courses of all kinds, 75 percent took courses from a postsecondary institution. At least half of those who participated in work-related courses took courses given by businesses or professional associations. Among adults who took courses for personal development, private organizations were the most likely providers (48 percent) (see supplemental table 10-2).

In 1999, adults with a bachelor's degree (65 percent) who were age 18 or older were more likely than those with only a high school degree (41 percent) to participate in a learning activity (see supplemental table 10-1).

**ADULT LEARNING: Percentage of adults ages 18–44 who participated in credential or other types of learning programs in the past 12 months: 1999**



[1] Includes both part- and full-time participation in postsecondary institutions leading to a college degree, diploma, or certificate.

[2] Includes participation in apprenticeships, courses for basic skills, personal development, English as a Second Language, work-related courses, and credential programs in organizations other than postsecondary institutions.

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Adult Education Component).

FOR MORE INFORMATION
Supplemental Tables 10-1, 10-2
NCES 2000–027

# Section 2

# *Learner Outcomes*

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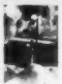


## Summary: Learner Outcomes

At the first Education Summit in 1989, President Bush and the Nation's governors established a series of educational goals for 2000. These Goals 2000 subsequently became the basis of major federal education legislation and a benchmark against which we continue to measure America's progress in educating our students. Two of these goals declared that "U.S. students will be the first in the world in mathematics and science achievement" and "all students will leave grades 4, 8, and 12 having demonstrated competency over challenging subject matter . . . (and) . . . learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our Nation's modern economy" (Bush 1990). As the data in *The Condition of Education 2000* indicate, the United States has not yet achieved these goals, but some progress has been made.

### ACADEMIC OUTCOMES

How students perform academically is key to their educational success. The federal government and other national and international organizations sponsor assessments to measure learning outcomes. The results of these assessments sometimes show mixed results and can be interpreted differently, depending on the definitions of academic success used. For example, some international assessments measure performance by examining student achievement relative to that of their peers in other countries. National assessments, in contrast, often evaluate performance relative to predefined standards. Assessments that measure academic performance over several years can judge academic success by examining how much students' average scores improve over time.

#### International assessments

The results of the Third International Mathematics and Science Study (TIMSS) were released in 1996. They showed that, on average, 8th-grade students in the United States performed lower than the international average in mathematics and higher than the international average in science (*Indicator 18* and NCES 97–198). The results for U.S. 4th-graders were better: they scored higher than the international average in both mathematics and science (*Indicator 18* and NCES 97–255). For U.S. 12th-graders, however, the average mathematics and science scores were lower than those of students in their final year of secondary school in the majority of other countries (*Indicator 18* and NCES 98–049). Further, on the assessments in physics and advanced mathematics, the United States was among the lowest scoring countries (*Indicator 19*).

The TIMSS results raised concerns about the quality of education in the United States, especially at the secondary level, as expressed in several books and commissioned reports (Boyer and the Carnegie Foundation for the Advancement of Teaching 1983; Powell, Farrar, and Cohen 1985). These results also renewed concerns about the competitiveness of the United States in the global economy (National Commission on Excellence in Education 1983).

#### Standards-based assessments

The National Assessment of Educational Progress (NAEP) measures American students' performance in a number of subjects (see *Supplemental Note 5*). In mathematics, for example, about one-quarter of students in grade 8 and about one-fifth of students in grades 4 and 12 performed at or above the Proficient level of achievement in 1996 (*Indicator 15*). In reading, about one-third of 4th- and 8th-grade students and 40 percent of 12th-grade students performed at or above the Proficent level in 1998 (*Indicator 13*). In writing, the majority of 4th-, 8th-, and 12th-grade students wrote at the Basic level, and one-quarter wrote at the Proficient level (*Indicator 14*).

## Summary: Learner Outcomes

The achievement levels used in these NAEP results are established by the National Assessment Governing Board (NAGB) and are modified periodically to reflect the latest advances in educational curricula and practices. The use of these achievement levels is a developing process and is subject to various interpretations. While the achievement levels are useful for reporting on patterns in the educational achievement of students in the United States, they should continue to be considered developmental and interpreted with caution.

### CHANGE OVER TIME

Another component of NAEP, the long-term trend assessment, has been measuring student performance regularly for several decades with assessment instruments that have not changed during that time. Although these tests do not reflect the latest educational practices, they do permit tracking progress over long periods of time. These assessments show that average scores have improved for all age groups between 1978 and 1996 in mathematics (*Indicator 18, The Condition of Education 1998*) and between 1982 and 1996 in science (*Indicator 1, The Condition of Education 1999*). In reading, average scores increased between 1971 and 1996 for 9- and 13-year-olds and remained stable for 17-year-olds (*Indicator 4, The Condition of Education 1999*).

Another trend that can be examined using the NAEP long-term trend results is the achievement gap between white and nonwhite students. This gap has been the focus of considerable attention among those concerned with equity in the quality of American education. For many people, equity is a more important benchmark against which to measure educational success than is comparing the performance with that of students in other countries (Jencks and Phillips 1998). Some researchers have argued that one of the reasons that U.S. students perform poorly on international assessments may be because resources are inequitably distributed to schools, resulting in large variations in achievement (Berliner and Biddle 1995). For example, during the 1995–96 school year, school districts with less than 5 percent of children living below the poverty level spent an average of $9,143 per pupil, compared with $6,791 per pupil spent by districts with more than 20 percent of children living below the poverty level (*Indicator 61*).

The NAEP long-term trend data show that the achievement gap between white and black students has decreased over the past 30 years in reading (*Indicator 17*). Despite such gains in the achievement of black students, however, the average scores of black students remain lower than those of whites at all ages tested. This gap exists when children first enter school (*Indicator 11*). The U.S. Department of Education's Early Childhood Longitudinal Study found that, in fall 1998, white kindergartners were more likely than their black peers to demonstrate proficiency in reading and mathematical skills.

### SOCIAL AND CULTURAL OUTCOMES

Another aspect of learning outcomes is how much American students learn about their country and what it means to be a good citizen. Recent research has shown that college students and adults demonstrate little interest in politics or activism and a limited knowledge of basic civics-related subjects. However, Americans still believe that preparing students for citizenship is one of the primary goals of education (Branson 1994). NAEP recently released the results of the 1998 civics assessment, which showed that approximately two-thirds of the students tested in grades 4, 8, and 12 scored at or above the basic level in civics, and about one-quarter of the students scored at or above the proficient level (*Indicator 20*).

## Summary: Learner Outcomes

Beyond students' knowledge of civic issues is their actual participation in civic activities. Education may instill in students a sense of responsibility to their country and desire to participate actively in public affairs. The youth component of the National Household Education Survey (NHES) showed that, in 1999, 49 percent of 6th–12th-grade students reported that they either read national news, watched or listened to news on radio or television, or discussed national news with adults almost daily (*Indicator 21*). In addition, students who had taken a course in the current or prior school year that required them to pay attention to government, politics, or national issues were more likely to participate in any of these civic activities on a daily basis than those who had not taken such a course.

Voting behavior is another civic activity that influences the social environment. In the 1996 and 1998 national elections, among those ages 25–44, college graduates were almost twice as likely as their peers who had graduated high school to vote (*Indicator 22*). High school dropouts of the same age were about half as likely as their peers who had graduated to vote. These results suggest that education may encourage students to become active participants in their political and social communities.

### ECONOMIC OUTCOMES

Finally, many educators, researchers, and policymakers agree that education is strongly tied to the economy's performance through the productivity of its workforce (Murnane and Levy 1996). An effective education system should teach future workers skills that expand their capacity to perform tasks, use productive technologies, adapt easily to new tasks or to changes in old tasks, and work effectively in teams (NCES 97–269).

At an individual level, worker productivity is often measured by the wages that employers are willing to pay, and education is often a key predictor of wage level, with higher relative levels of education leading to higher wages. The earnings differential between young adults with different levels of educational attainment demonstrates this point. For example, in 1998, when comparing the annual earnings of those who completed a 4-year college degree with the earnings of those who obtained no more than a high school diploma or GED, male and female college graduates earned 56 and 100 percent more, respectively (*Indicator 23*). Further, since 1980, the percentage difference between the earnings of young adults who completed at least a bachelor's degree and their counterparts who completed no more than high school has increased.

# Early Childhood Outcomes

## Kindergartners' Skills and Proficiency in Reading and Mathematics

*As children enter kindergarten for the first time, they are acquiring the basic skills associated with the development of early reading and mathematical literacy, such as the recognition of letters and numbers.*

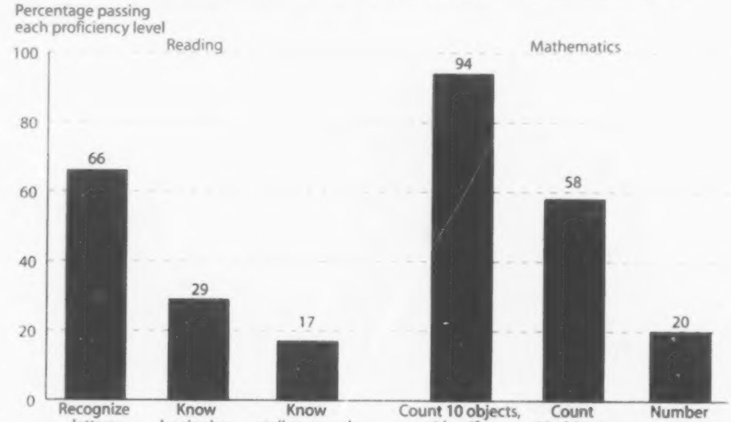
The proficiency children demonstrate in reading and mathematics is vital to their learning experiences. In kindergarten, children further develop their emergent literacy skills, such as recognizing letters and the beginning and ending sounds of words. Children in kindergarten also develop mathematical skills and knowledge related to numbers, shapes, the sequence of numbers (e.g., 2, 4, 6, 8...) and the comparison of objects (e.g., which one is longer, larger, or heavier).

In fall 1998, as children entered kindergarten, 66 percent recognized letters, 29 percent recognized beginning of word sounds, and 17 percent recognized ending of word sounds. Girls were more likely than boys to achieve each of these proficiency levels. In addition, children whose mothers have higher levels of education achieved these proficiency levels at higher rates than children whose mothers have less education. White and Asian children are more likely to achieve each level than are black or Hispanic children (see supplemental table 11-1).

Among children who entered kindergarten for the first time in 1998, 94 percent recognized basic (single-digit) numbers and shapes. In addition, 58 percent recognized numbers greater than single digits, could count beyond 10, and could use nonstandard units of length to compare objects. Finally, about 20 percent could sequence numbers (e.g., 2, 4, 6, 8, 10), read two-digit numerals, identify the ordinal position of an object (e.g., the third flower in a row of flowers), and solve basic word problems.

The differences in mathematics proficiency by mother's education and children's race-ethnicity are similar to those in reading. In mathematics, boys and girls are more evenly matched, with girls having a slight advantage in recognizing basic numbers and shapes.

**LEARNER OUTCOMES: Reading and mathematics proficiency of first-time kindergartners: Fall 1998**



NOTE: Based on those assessed in English. Excludes 19 percent of Asian and 30 percent of Hispanic children.

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

FOR MORE INFORMATION
Supplemental Note 3
Supplemental Table 11-1
NCES 2000-070

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# Early Childhood Outcomes

## Kindergarteners' Overall Reading and Mathematics Performance

***Upon entering kindergarten, children's reading and mathematics skills and knowledge differ by characteristics such as their sex, race-ethnicity, and mother's education.***

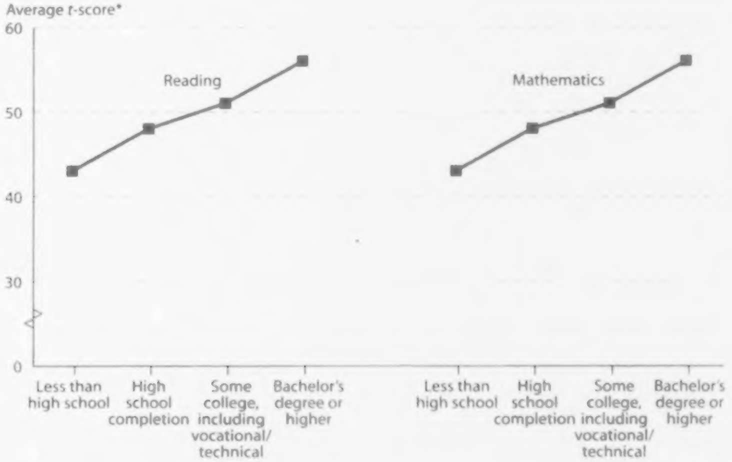
Children's cognitive skills and knowledge are thought to be core ingredients for success in school. Researchers have conceived of cognitive development as an extended set of multidimensional skills (e.g., reading and mathematics). Children's reading and mathematical knowledge and skills play an important role in their chances for scholastic success (Kagan, Moore, and Bredekamp 1995).

Among first-time kindergartners in 1998, children's reading skills and knowledge differed by their sex, with girls performing slightly better than boys. Overall, however, girls and boys performed similarly in mathematics.

Children's average performance in reading and mathematics increased with the level of their mothers' education. Nonetheless, some children whose mothers had less than a high school education showed a high level of reading and mathematical skills and knowledge (6 percent scored in the highest quartile in reading and 7 percent in the highest quartile in mathematics) (see supplemental tables 12-1 and 12-2).

White and Asian children were more likely to score in the highest quartile than black or Hispanic children in reading and mathematics. Still, many minority children performed above the average for all children. In reading, 15 percent of black children and 15 percent of Hispanic children scored in the highest quartile.

**LEARNER OUTCOMES: Average reading and mathematics performance of first-time kindergartners, by mother's highest education level: Fall 1998**



* *t*-scores normalize the actual distribution to an average of 50 and a standard deviation of 10.

NOTE: Based on those assessed in English. Excludes 19 percent of Asian and 30 percent of Hispanic children.

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

FOR MORE INFORMATION

Supplemental Note 3

Supplemental Tables 12-1, 12-2

Kagan, Moore, and Bredekamp 1995

NCES 2000-070

## Academic Outcomes

# Reading Performance of Students in Grades 4, 8, and 12

*Reading scores for 8th-grade students increased between 1992 and 1998, while scores for 4th- and 12th-grade students remained unchanged. Females outscored males, and white students outscored black and Hispanic students at all three grade levels.*

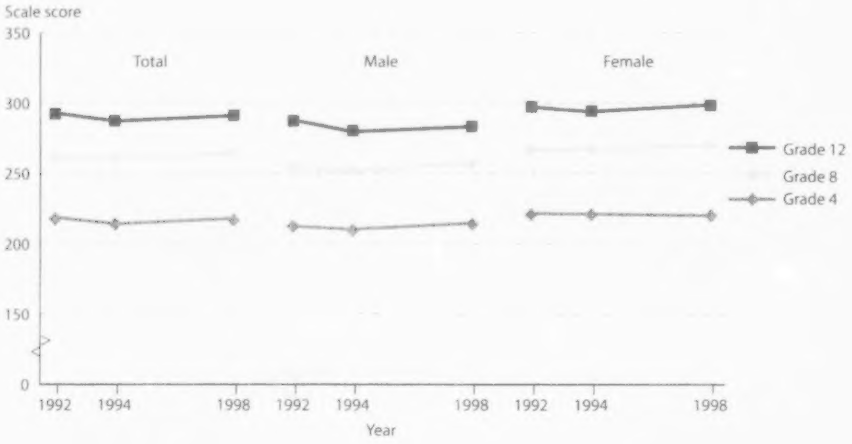
Reading performance improved between 1992 and 1998 at the 8th-grade level but remained the same at the 4th- and 12th-grade levels. For 12th graders, average reading scores decreased between 1992 and 1994 but returned to about their original level in 1998.

Changes in the percentages of students performing at different achievement levels followed similar patterns: the percentage of students scoring at or above the Proficient level between 1992 and 1998 increased for 8th-graders and remained unchanged for 4th- and 12th-graders (see supplemental table 13-1). In 1998, about one-third of 4th- and 8th-grade students and 40 percent and 12th-grade students performed at or above the Proficient level (see supplemental table 13-2).

In addition, little change occurred in the performance of population subgroups. In all three years, for example, females outperformed males in reading at the 4th-, 8th-, and 12th-grade levels on average. Among 4th-grade males, however, average scores increased from 1994 to 1998. The average scores of 4th-grade females remained stable over the same period.

White students outperformed their black and Hispanic classmates at each grade level in each year. Average reading scores for black students in grades 4 and 8 increased between 1994 and 1998, as did average reading scores for 12th-grade Hispanic students. The gap in scores between black and white students remained about the same between 1992 and 1998 for all grades (see supplemental table 13-1).

**READING PERFORMANCE: Average reading performance, by grade and sex: 1992, 1994, and 1998**



SOURCE: U.S. Department of Education, NCES. *NAEP 1998 Reading: A Report Card for the Nation and the States* (NCES 1999–500), 1999.

FOR MORE INFORMATION
Supplemental Notes 1, 6
Supplemental Tables 13-1, 13-2

# Academic Outcomes

## Writing Performance of Students in Grades 4, 8, and 12

*The results of the 1998 National Assessment of Educational Progress indicate that most students are not proficient writers.*

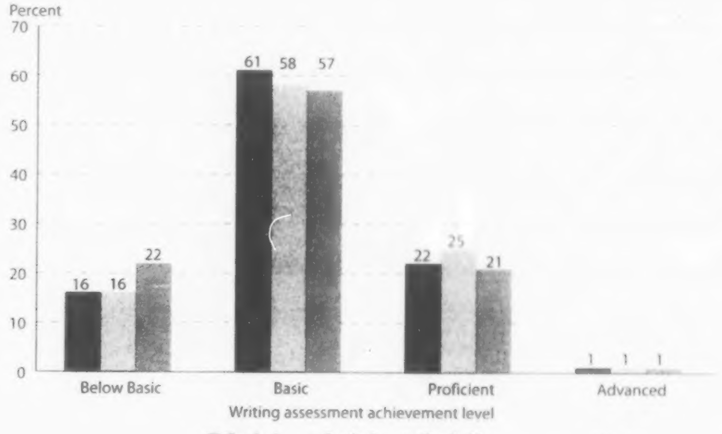
The 1998 National Assessment of Educational Progress (NAEP) in writing provides a portrait of student writing performance at the end of the 20th century and suggests how well today's students will be able to communicate in the future.

The results of the assessment indicate that most students exhibited at best only partial mastery of the requisite knowledge and skills. The majority of 4th-, 8th-, and 12th-grade students wrote at the Basic level. About one-quarter of students in each grade could write at the Proficient level, and 1 percent of students could write at the Advanced level.

Although performance on the writing assessment was low for the majority of most groups of students, some subgroups were more likely than others to score at the higher levels. Females, for example, were more likely than males to score at the Advanced and Proficient levels and less likely than males to score below the Basic level at all three grade levels. Differences among racial-ethnic groups existed as well. Whites were more likely to score at the Proficient level and less likely to score below the Basic level when compared with black, Hispanic, and American Indian students at all three grade levels (see supplemental table 14-1).

The NAEP writing results also showed certain home and school factors to be positively associated with performance on the assessment. For example, at all three grades, students whose teacher always or sometimes talked to them about their writing have higher scale scores than their peers whose teachers never talked to them about their writing. Similarly, for students in grades 8 and 12, students who were always asked to write more than one draft of a paper had higher average scale scores than did their peers who were sometimes or never asked to do so. The results also showed that, for all three grades, the more frequently students discussed their studies with someone at home, the better their writing scores (see supplemental table 14-2).

**WRITING PERFORMANCE: Percentage distribution of students according to the NAEP writing assessment achievement levels, by grade: 1998**



NOTE: Percentages may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, NCES. *NAEP 1998 Writing: A Report Card for the Nation and the States* (NCES 1999–462), 1999.

FOR MORE INFORMATION:
Supplemental Notes 3, 6
Supplemental Tables 14-1, 14-2

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# Academic Outcomes

## Mathematics Performance of Students in Grades 4, 8, and 12

*Mathematics performance improved steadily at all grade levels between 1990 and 1996. For students in the 12th grade, scores for females reached the same level as those of their male counterparts.*

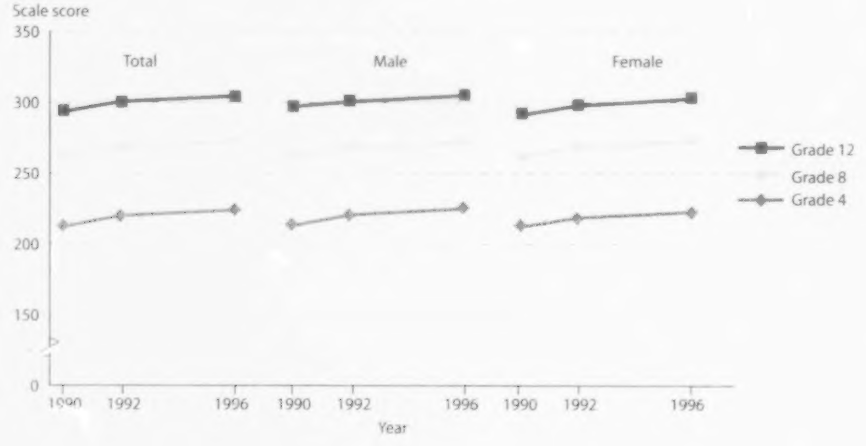
During the 1990s, students demonstrated a continuous increase in mathematics performance. Overall, average mathematics scale scores improved between 1990 and 1992 and between 1992 and 1996 in grades 4, 8, and 12. Similarly, the percentage of students scoring at or above the Proficient achievement level increased between 1990 and 1996 at all three grade levels (see supplemental table 15-1). In 1996, about one-quarter of students in 8th grade and about one-fifth of students in 4th and 12th grades performed at or above Proficient level of achievement.

Sex differences in mathematics performance changed in the 1990s. While both male and female 12th-graders improved between 1990 and 1996, males outperformed females in 1990 and 1992, but in 1996 males and females had similar average scores. For 4th-grade students, however, the opposite trend was true. In 1990 and 1992, male and female 4th-graders, on average, scored about the same, while in 1996, 4th-grade males scored higher than their female counterparts. For 8th-graders, there was no difference in scores between the genders in 1990, 1992, and 1996.

Despite an overall improvement in mathematics scores, white students have consistently outperformed their black and Hispanic classmates. Average scores for white students were higher than those for black and Hispanic students at all three grade levels in 1990, 1992, and 1996. The size of these performance gaps in scores between black or Hispanic and white students also remained similar between 1990 and 1996 (see supplemental table 15-2).

SOURCE: U.S. Department of Education, NCES. *NAEP 1996 Mathematics Report Card for the Nation and the States: Findings from the National Assessment of Educational Progress* (NCES 97-488), 1997.

**MATHEMATICS PERFORMANCE: Average mathematics performance, by grade and sex: 1990, 1992, and 1996**



FOR MORE INFORMATION:
Supplemental Notes 1, 8
Supplemental Tables 15-1, 15-2

# Academic Outcomes

## High Performance in Mathematics and Science

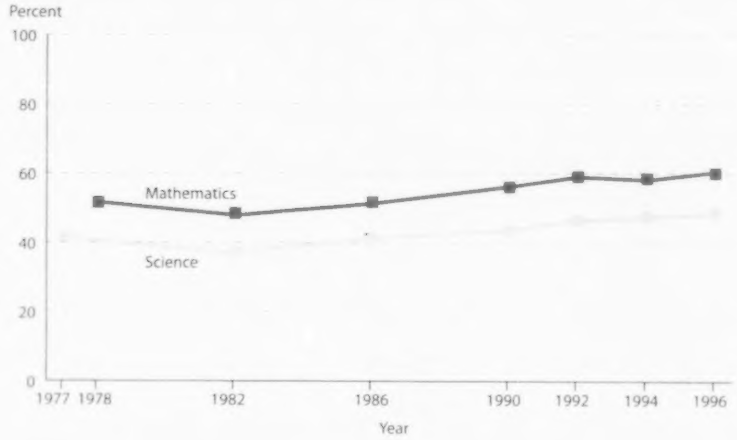
*The percentage of 17-year-old students scoring at or above 300 on the National Assessment of Educational Progress (NAEP) in mathematics and science has increased over the past 20 years.*

Scores of 300 or higher on NAEP long-term trend assessments (see *Supplemental Note 6*) indicate high performance in a subject area and demonstrate a student's ability to think critically and apply reasoning, analytical, and problem-solving skills. A score of 300 on the mathematics assessment indicates both the ability to perform moderately advanced numeric procedures and logical reasoning, and a developing understanding of number systems. For science, a score of 300 represents the ability to analyze scientific procedures and data and a growing understanding of principles from the physical sciences.

The long-term trend version of NAEP offers the ability to measure change over time. These data show that, for both mathematics and science, a greater percentage of 17-year-old students scored at or above 300 in 1996 than in 1978 (for mathematics) or 1977 (for science). For mathematics, the percentage of students scoring at or above 300 remained stable from 1978 to 1982, was greater in 1990 than in 1982, and remained stable again between 1990 and 1996. For science, the percentage of students scoring at 300 or above decreased between 1977 and 1982, but then increased between 1982 and 1996.

Trends in high mathematics performance were slightly different for females than males. In 1978, males were slightly more likely than females to score at or above 300 on the mathematics assessments; in 1996, males and females were as likely to score at or above 300. No such change occurred for the science assessments; males were more likely than females to score at or above 300 in 1977 and 1996 (see supplemental table 16-1).

**HIGH PERFORMANCE: Percentage of 17-year-old students scoring at or above 300 on the NAEP mathematics and science assessments: 1977–96**



SOURCE: U.S. Department of Education, NCES. *National Assessment of Educational Progress, NAEP 1996 Trends in Academic Progress* (NCES 2000–499), 2000 (forthcoming).

FOR MORE INFORMATION:
Supplemental Note 6
Supplemental Table 16-1

## Academic Outcomes

# Trends in the Achievement Gap in Reading Between White and Black Students

*While white students continue to outperform black students in reading, this achievement gap decreased between the early 1970s and the late 1980s. Since the late 1980s, however, the gap has remained relatively stable.*

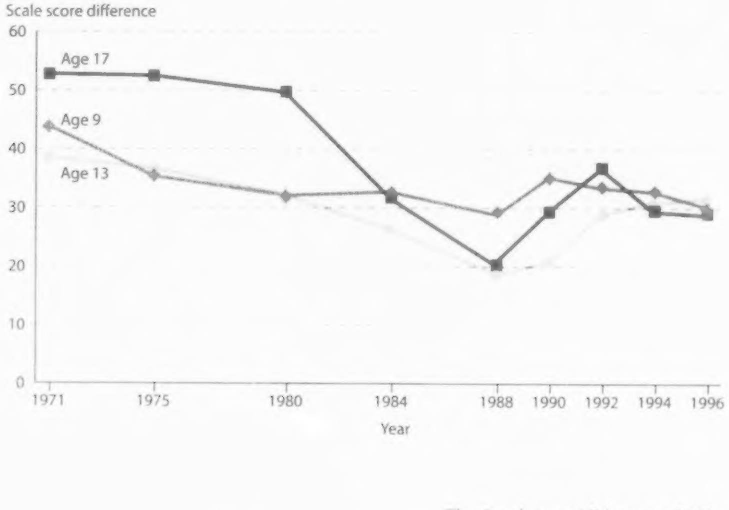
The National Assessment of Educational Progress (NAEP) has assessed trends in students' reading performance since the early 1970s. NAEP thus provides a picture of how student performance in reading has changed over time, specifically among students of different ages and racial-ethnic groups. One trend in particular that can be analyzed with these data is the achievement gap between white and black students. This gap has been the focus of considerable attention among those concerned with equity in the quality of education that is provided to America's students.

Since 1971, black 9-, 13-, and 17-year-olds have had lower reading scores, on average, than those of their white peers (see supplemental table 17-1). However, the average difference between black and white students' scores has changed over time. There has been an overall narrowing in this achievement gap since 1971, most of which is due to decreases that occurred before 1988. For example, between 1971 and 1988, the black-white score gap decreased for 13- and 17-year-olds. Between 1988 and 1996, however, the gap increased for 13-year-olds and remained relatively stable for 17-year-olds.

One indication of the meaning of these score changes for the achievement of black students is that in 1971 the average reading score of black 17-year-olds (239) was below that of white 13-year-olds (261). By 1988 the average reading score of black 17-year-olds (274) was between that of white 17-year-olds (295) and white 13-year-olds (261).

SOURCE: U.S. Department of Education, NCES. *NAEP 1996 Trends in Academic Progress* (NCES 2000–499), 2000 (forthcoming).

**READING ACHIEVEMENT GAP: Difference in average reading performance of 9-, 13-, and 17-year-old white and black students: 1971–96**



FOR MORE INFORMATION:
Supplemental Notes 3, 6
Supplemental Table 17-1

## Academic Outcomes

# International Comparisons of Student Performance in Mathematics

*The average 4th-grade student in the United States scored above the international average in mathematics; students in the 8th and 12th grades scored below the international average.*

The Third International Mathematics and Science Study (TIMSS) is the largest international comparative study of educational achievement, assessing performance in mathematics and science of more than half a million students in 41 countries. In mathematics, on average, U.S. students at the 4th-grade level scored above the international average in mathematics, performed above their peers in 12 countries, and scored lower than their peers in 7 countries.

Conversely, both 8th- and 12th-grade students in the United States scored below the international averages in mathematics. Of the 41 nations participating at the 8th-grade level, the average student in the United States scored higher than their peers in seven countries and was outperformed by students in 20 countries. Of the 21 nations participating at the final year of secondary school level, U.S. students scored, on average, below the average student in 14 other countries and above the average student in two other countries.

Sex gaps in mathematics performance were apparent in some of the participating countries. At the 4th-grade level, male students outperformed their female classmates in 3 of the 25 countries for which data are available. At the 8th-grade level, male students outperformed their female counterparts in 8 of the 39 countries for which data are available. In their final year of secondary school, however, males outperformed females in mathematics in 18 of the 21 participating countries. In the United States, males and females scored similarly at all three grade levels. Female students did not score higher than male students at any grade level in any country (see supplemental table 18-1).

**MATHEMATICS PERFORMANCE:** Average mathematics performance of 4th-grade[1] students: 1995

| Average score relative to U.S. | Country | |
|---|---|---|
| Significantly higher | Austria[2] | Korea |
| | Czech Republic | Netherlands[2] |
| | Hong Kong | Singapore |
| | Japan | |
| Not significantly different | Australia[2] | Ireland |
| | Canada | Israel[2] |
| | Hungary[2] | Slovenia[2] |
| Significantly lower | Cyprus | Latvia (LSS)[2] |
| | England | New Zealand |
| | Greece | Norway |
| | Iceland | Portugal |
| | *International average* | Scotland |
| | Iran, Islamic Republic | Thailand[2] |
| | Kuwait[2] | |

[1] In most countries. See *Supplemental Note 7* for more information.

[2] Did not satisfy one or more of the sampling or other guidelines. In the final year of secondary school, this included the United States. Latvia is designated LSS for Latvian-speaking schools only. See *Supplemental Note 7* for more information.

SOURCES: U.S. Department of Education, NCES. *Pursuing Excellence: A Study of U.S. Fourth-Grade Mathematics and Science Achievement in International Context* (NCES 97–255), 1997; U.S. Department of Education, NCES. *Pursuing Excellence: A Study of U.S. Eighth-Grade Mathematics and Science Teaching, Learning, Curriculum, and Achievement in International Context* (NCES 97–198), 1996; U.S. Department of Education, NCES. *Pursuing Excellence: A Study of U.S. Twelfth-Grade Mathematics and Science Achievement in International Context* (NCES 98–049), 1998.

FOR MORE INFORMATION:
Supplemental Note 7
Supplemental Table 18-1

**MATHEMATICS PERFORMANCE: Average mathematics performance of 8th-grade[1] students: 1995**

| Average score relative to U.S. | Country | |
|---|---|---|
| Significantly higher | Australia[2] | Ireland |
| | Austria[2] | Japan |
| | Belgium (Flemish) | Korea |
| | Belgium (French)[2] | Netherlands[2] |
| | Bulgaria[2] | Russian Federation |
| | Canada | Singapore |
| | Czech Republic | Slovak Republic |
| | France | Slovenia[2] |
| | Hong Kong | Sweden |
| | Hungary | Switzerland |
| | *International average* | |
| Not significantly different | Denmark[2] | New Zealand |
| | England | Norway |
| | Germany[2] | Romania[2] |
| | Greece[2] | Scotland[2] |
| | Iceland | Spain |
| | Israel[2] | Thailand[2] |
| | Latvia (LSS) | |
| Significantly lower | Colombia[2] | Lithuania |
| | Cyprus | Portugal |
| | Iran, Islamic Republic | South Africa[2] |
| | Kuwait[2] | |

**MATHEMATICS PERFORMANCE: Average mathematics performance of students in their final year of secondary school: 1995**

| Average score relative to U.S. | Country | |
|---|---|---|
| Significantly higher | Australia[2] | *International average* |
| | Austria[2] | Netherlands[2] |
| | Canada[2] | New Zealand |
| | Denmark[2] | Norway[2] |
| | France[2] | Slovenia[2] |
| | Germany[2] | Sweden |
| | Hungary | Switzerland |
| | Iceland[2] | |
| Not significantly different | Czech Republic | Lithuania |
| | Italy[2] | Russian Federation |
| Significantly lower | Cyprus[2] | South Africa[2] |

[1] In most countries. See *Supplemental Note 7* for more information.

[2] Did not satisfy one or more of the sampling or other guidelines. In the final year of secondary school, this included the United States. Latvia is designated LSS for Latvian-speaking schools only. See *Supplemental Note 7* for more information.

SOURCES: U.S. Department of Education, NCES. *Pursuing Excellence: A Study of U.S. Fourth-Grade Mathematics and Science Achievement in International Context* (NCES 97–255), 1997; U.S. Department of Education, NCES. *Pursuing Excellence: A Study of U.S. Eighth-Grade Mathematics and Science Teaching, Learning, Curriculum, and Achievement in International Context* (NCES 97–198), 1996; U.S. Department of Education, NCES. *Pursuing Excellence: A Study of U.S. Twelfth-Grade Mathematics and Science Achievement in International Context* (NCES 98–049), 1998.

FOR MORE INFORMATION:
Supplemental Note 7
Supplemental Table 18-1

# Academic Outcomes

## Physics and Advanced Mathematics Performance

*Twelfth-grade students in the United States who participated in international assessments of physics and advanced mathematics scored lower than students in their final year of secondary school in the majority of participating countries.*

The physics and advanced mathematics component of the Third International Mathematics and Science Study (TIMSS) tested a subgroup of students who had taken courses in these advanced subjects. The results showed that U.S. students in 12th grade who had taken courses in physics or advanced mathematics did not perform as well, on average, as their counterparts in most other countries who had taken similar courses. In physics, the average score of U.S. students was lower than that of students in every participating country except Austria. In advanced mathematics, U.S. students scored lower than students in 11 of the 16 participating countries, the exceptions being Italy, the Czech Republic, Germany, and Austria.

Sex gaps were also apparent within most countries. Male students outperformed their female counterparts in 11 of the 16 participating countries in advanced mathematics and in all but one of the countries in physics. Male students in the United States outscored their female peers in both advanced mathematics and physics. In neither subject and in no country did females outperform males (see supplemental table 19-1).

**INTERNATIONAL COMPARISONS: Average physics and advanced mathematics performance scores for students in their final year of secondary school, by country: 1995**

| Physics | | Average score relative to U.S. | Advanced mathematics | |
|---|---|---|---|---|
| Australia*<br>Canada<br>Cyprus<br>Czech Republic<br>Denmark*<br>France<br>Germany<br>Greece<br>*International average* | Latvia<br>Norway<br>Russian Federation<br>Slovenia*<br>Sweden<br>Switzerland | *Significantly higher* | Australia*<br>Canada<br>Cyprus<br>Denmark*<br>France<br>Greece<br>*International average*<br>Lithuania | Russian Federation<br>Slovenia*<br>Sweden<br>Switzerland |
| Austria* | | *Not significantly different* | Austria*<br>Czech Republic | Germany<br>Italy* |
| None | | *Significantly lower* | *None* | |

* Did not satisfy one or more of sampling or other guidelines. In both subjects, this included the United States.

SOURCE: U.S. Department of Education, NCES. *Pursuing Excellence: A Study of U.S. Twelfth-Grade Mathematics and Science Achievement in International Context* (NCES 98–049), 1998.

FOR MORE INFORMATION
Supplemental Note
Supplemental Table 19-1

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# Social and Cultural Behaviors

## Civics Performance of Students

*According to the* National Assessment of Educational Progress (NAEP) 1998 Civics Report Card for the Nation, *about one-quarter of the students in the United States perform at or above the Proficient level of achievement in civics.*

In 1998, NAEP assessed 4th-, 8th-, and 12th-grade students in civics, providing a picture of how well students understand such topics as civic life, politics and government, the foundations of the American political system, the Constitution, the relationship of the United States to other nations and to world affairs, and the roles of citizens in American democracy. The assessment measures three levels of achievement: Basic, Proficient, and Advanced. At the Basic level, students demonstrate partial mastery of the prerequisite knowledge and skills that are fundamental to achievement at each grade level. At the Proficient level, students perform solidly at each grade level, demonstrating competency with challenging subject matter, including subject-matter knowledge, application of this knowledge to real-world situations, and analytical skills appropriate to the subject matter. At the Advanced level, students exhibit superior performance.

About one-quarter of the students in grades 4, 8, and 12 scored at or above the Proficient level in civics, and about two-thirds of the students scored at or above the Basic level. A sex gap for students in grades 8 and 12 was evident at the Basic level. A higher percentage of females than males performed at the Basic level. The percentages of males and females performing at or above the Proficient level were similar. At the 12th-grade level, however, more males than females performed at the Advanced level of achievement. Fourth-grade males and females performed similarly to one another (see supplemental table 20-1).

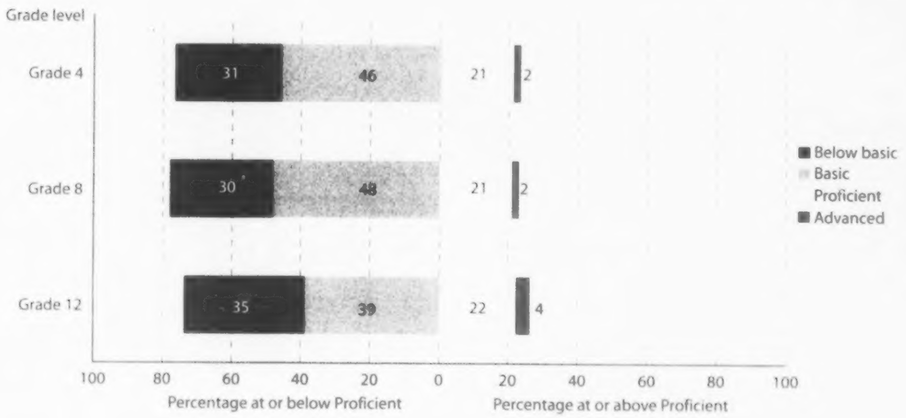
Racial-ethnic gaps were also apparent at all three grade levels. White students were consistently more likely to score at or above the Proficient level than all other racial-ethnic groups except Asians/Pacific Islanders. In addition, at the 12th-grade level, white students were more likely than their black and Hispanic peers to score at the Advanced level of achievement (see supplemental table 20-1).

NOTE: Percentages may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, NCES. *NAEP 1998 Civics Report Card for the Nation: Findings from the National Assessment of Educational Progress* (NCES 2000–457), 1999.

FOR MORE INFORMATION:
Supplemental Notes 3, 6
Supplemental Table 20-1

**CIVICS PERFORMANCE: Percentage distribution of students, by civics achievement level and grade: 1998**



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# Social and Cultural Behaviors

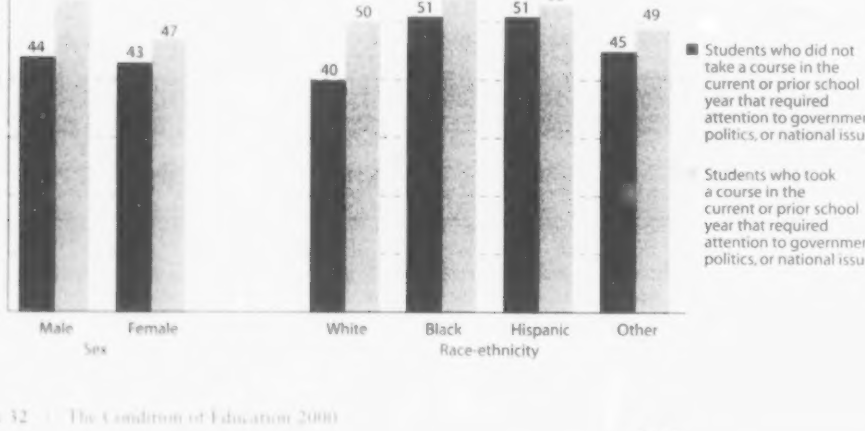
## Civic Activities of Students: News Attentiveness

*Student news attentiveness is related to school instruction about government. Students in grades 6–12 who recently took a course that required them to pay attention to government, politics, or national issues were more likely than students who had not taken such a course to report a relatively high frequency of news attentiveness.*

In the Youth Interview Component of the National Household Education Survey (NHES), a nationally representative sample of 6th–12th-grade students were asked in 1999 about their participation in various news gathering activities outside of school. According to this survey, 49 percent of such students reported either watching or listening to the national news, reading about national issues, or discussing national news and politics with their parents almost daily. Seventy percent of all 6th–12th-grade students reported they had taken courses in the current or prior school year that required them to pay attention to government, politics, or national issues. On average, students who had taken these courses were more likely than those who had not done so to report that they participated in any of the previously mentioned news gathering activities on an almost daily basis (see supplemental table 21-1).

A higher percentage of males than females reported participating in at least one of the three news gathering activities almost daily. Among racial-ethnic groups, black and Hispanic students were more likely than white students to report participating in at least one of the three news gathering activities on an almost daily basis. Some of these differences among population subgroups in news attentiveness did not change when considering coursetaking. Among students who took such a course within the past two years, males were still more likely than females, and black students more likely than white students, to report watching or listening to the national news, reading about national issues, or discussing national news and politics with their parents almost daily.

**NEWS ATTENTIVENESS: Percentage of 6th–12th-grade students reporting watching or listening to the national news, reading about national issues, or discussing national news and politics with their parents almost daily, by sex, race-ethnicity, and coursetaking: 1999**



SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Youth Interview Component).

FOR MORE INFORMATION:
Supplemental Note [illegible]
Supplemental Table 21-1

# Social and Cultural Behaviors

## Voting Participation

*Voting rates generally increase with educational attainment. Although voting rates have decreased over time, the rates for adults ages 25–44 with a bachelor's degree or higher decreased less than those with less education.*

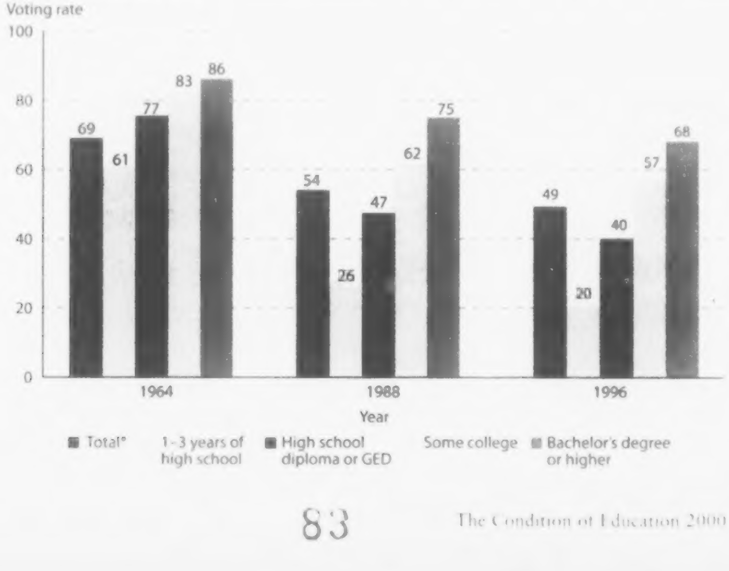
Completion of successively higher levels of education is associated with individuals' participating actively in the political lives of their communities. In the 1998 congressional elections, college graduates ages 25–44, as a group, were 77 percent more likely than high school graduates of the same age group to vote. High school dropouts in the same age range were 52 percent less likely than high school graduates to vote. Similarly, in the 1996 presidential elections, among people ages 25–44, college graduates were 70 percent more likely than high school graduates to vote, and high school dropouts were 49 percent less likely than high school graduates to vote (see supplemental table 22-1).

At all educational attainment levels, however, the voting rates for the 1996 presidential election were lower than those for the 1964 election, and the voting rates for the 1998 congressional election were also lower than those for the 1974 election (see supplemental table 22-1).

There generally was a greater decline in voting rates among those with less education than among those with more education. In the presidential elections, for example, the voting rate for 25- to 44-year-olds with a college degree fell from 86 percent in 1964 to 68 percent in 1996, compared with a decline for those with less than a high school education from 61 percent in 1964 to 20 percent in 1996.

In the 1998 congressional elections, young adults ages 18–24 who were enrolled in college were more likely to have voted than their counterparts of the same age group who were not enrolled in school (24 and 16 percent, respectively). Among those not enrolled, adults ages 2[illegible]24 were more likely to vote than those ages 18–20 (see supplemental table 22-2).

**VOTING PARTICIPATION: Voting rates for presidential elections for the population ages 25–44, by highest level of education completed: 1964, 1988, and 1996**



* Includes those with less than nine years of education.

NOTE: In 1992, the Current Population Survey (CPS) changed the questions used to obtain educational attainment. The voting rate is calculated as the numbers of voters ages 25–44 divided by the total population in the same age group.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Reports, "Voting and Registration in the Election of November" (various years), series P-20, Nos. 143, 440, and 504.

FOR MORE INFORMATION:
Supplemental Note 1
Supplemental Tables 22-1, 22-2

# Economic Outcomes

## Annual Earnings of Young Adults

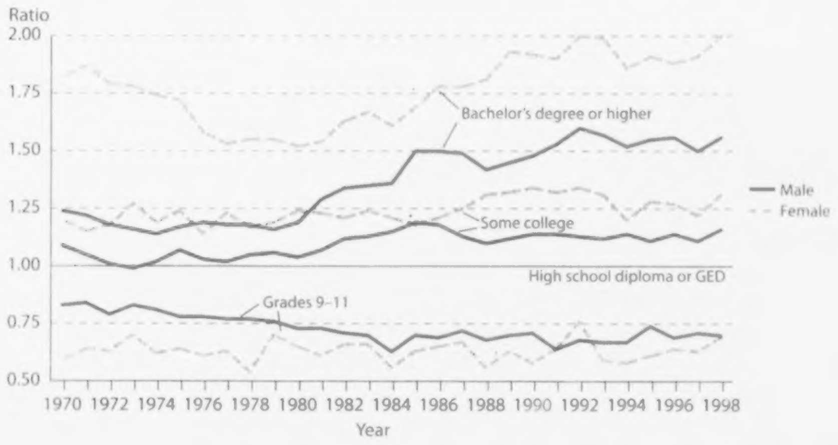
*Young adults with higher levels of education earn more than their peers with less education.*

Young adults ages 25–34 who completed at least a bachelor's degree earned more than those who had less education. For example, in 1998, male and female college graduates earned 56 and 100 percent more, respectively, than those who completed high school education. In contrast, young males and females ages 25–34 who dropped out of high school earned 30 and 31 percent less, respectively, than their peers who received a high school diploma (see supplemental tables 23-1 and 23-2).

Between 1980 and 1998, the earnings of young adults who completed at least a bachelor's degree have increased relative to their counterparts who completed no more than a high school education. This increase occurred for both men and women, from 19 percent to 56 percent higher for males, and from 52 percent to 100 percent higher for females. During the same period, the earnings of young adults who completed less than a high school education continued to lag behind those with a high school education, varying from 27 percent to 30 percent less for males, and from 35 to 31 percent less for females (see supplemental table 23-2).

The difference in earnings between men and women has declined over time at all education levels. At each level of educational attainment, from high school diploma or GED to a bachelor's degree or higher, the proportionate difference in median annual earnings between male and female wage and salary workers has decreased. For example, in 1998, males with a high school education earned 68 percent more than their female counterparts, while males with at least a bachelor's degree earned 31 percent more than females at the same educational level. In 1970, the comparable figures were 142 percent more for high school completers and 64 percent more for those with at least a bachelor's degree (see supplemental table 23-3).

**ANNUAL EARNINGS: Ratio of median annual earnings of all wage and salary workers ages 25–34 with various levels of educational attainment to those with a high school diploma or GED: 1970–98**



NOTE: This ratio is most useful when compared with 1.0. For example, the ratio of 1.56 in 1998 for males whose highest education level was a bachelor's degree or higher means that they earned 56 percent more than males who had a high school diploma or GED. The ratio of 0.70 in 1998 for males whose highest education level was grades 9–11 means that they earned 30 percent less than males who had a high school diploma or GED. The Current Population Survey (CPS) questions used to obtain educational attainment were changed in 1992. In 1994, the survey methodology for the CPS was changed and weights were adjusted.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys.

FOR MORE INFORMATION:
Supplemental Notes 1, 3
Supplemental Tables 23-1, 23-2, 23-3

## Section 3

# *Student Effort and Academic Progress*

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# Summary: Student Effort and Academic Progress

The learner outcomes described in Section 2 reflect many factors, such as the effort students put into their studies, the choices they make as they proceed through the education system, and the quality of the institutions they attend. Student effort plays an important role in determining how well students perform at each level and affects their access to and success at the next level should they persist. The indicators in this section use the student as the unit of analysis to examine various aspects of student effort, academic progress, and attainment as they proceed through the elementary, secondary, and postsecondary education systems.

## STUDENT ASPIRATIONS AND COURSETAKING

Students' educational expectations have increased substantially since 1980. Increasingly, high school students are being advised by their parents, counselors, and teachers to go to college (*Indicator 7, The Condition of Education 1994*), and growing numbers take that advice. The percentage of 12th-graders who definitely planned to complete a bachelor's degree increased from 35 to 56 percent between 1980 and 1997 (*Indicator 24*). Women's expectations have increased more than men's. In 1980, there was no difference in the percentages of men and women who definitely planned to complete a 4-year program, but in 1997, women were more likely than men to expect to do so.

Reflecting in part these increased aspirations (as well as changes in graduation requirements and course offerings), today's high school graduates are taking more courses and more difficult courses than they were in the early 1980s. The average number of credits earned by high school graduates increased from 22 credits in 1982 to 25 credits in 1998 (*Indicator 27*). Furthermore, this increase has been in academic rather than vocational or enrichment/other credits. Racial-ethnic differences in the number of courses taken have diminished but not disappeared. In 1982, white graduates earned more academic credits, on average, than Hispanic graduates, but there was no difference in 1998. In contrast, there generally were black-white differences in the number of academic credits earned between 1982 and 1998.

In addition to taking more academic courses, high school graduates are taking more demanding courses in mathematics and science. The percentage of high school graduates who took the most rigorous mathematics curriculum (Advanced Placement calculus, calculus, and calculus/analytic geometry) doubled from 6 percent to 12 percent between 1982 and 1998 (*Indicator 40*). Also, the percentage who took both chemistry and physics increased from 7 percent to 19 percent during the same period. Yet another indicator that students are tackling more academic challenges is the number of high school students taking advanced placement (AP) examinations (for which they can earn college credit). Between 1984 and 1997, the number of students who took the AP examinations increased from 50 to 131 students per 1,000 12th-graders (*Indicator 14, The Condition of Education 1999*).

### Persistence and progress in elementary/secondary education

In addition to examining students' academic achievement at various grade levels (as is done in Section 2), it is important to monitor their progress through school up to and including completion. Early problems in school can accumulate and lead eventually to dropping out, which can have long-term consequences such as lower earnings (*Indicator 12, The Condition of Education 1999*). Also, high school dropouts put their own children at a disadvantage with respect to many indicators related to educational success (see, for example, *Indicator 33*).

# Summary: Student Effort and Academic Progress

There have been improvements at many grade levels in students' progress. Young children today are entering kindergarten more prepared for school than in the past. Between 1991 and 1996, increased numbers of 3-, 4-, and 5-year-olds enrolled in preschool or kindergarten programs (*Indicator 1, The Condition of Education 1998*) and participated in early literacy activities at home (*Indicator 2, The Condition of Education 1998*). In addition, high school completion rates have increased. In 1998, 88 percent of 25- to 29-year-olds had completed high school, up from 78 percent in 1971 (*Indicator 59, The Condition of Education 1999*). The event dropout rate (the proportion of students enrolled in one year who are not enrolled the following year) is relatively low, with four percent of all young people ages 15–24 years old dropping out of grades 10–12 in 1998 (*Indicator 28*). Finally, many who do drop out reconsider their decision later. Fifty-eight percent of 1990 high school sophomores who dropped out of school either completed or reenrolled in school within two years of their scheduled graduation, raising the total who completed from 87 percent in August 1992 to 92 percent by 1994 (*Indicator 29*).

Despite these encouraging findings, persistence and progress vary by gender, race-ethnicity, and urbanicity. For example, in 1998, girls beginning kindergarten were perceived to be more likely than boys to persist at tasks, show eagerness to learn, and pay attention often or very often (*Indicator 26*). In addition, white and Asian children were more likely than black or Hispanic children to exhibit these characteristics, as were children whose mothers had higher versus lower levels of education. Also, Hispanics (especially those born outside the United States) tend to have higher dropout rates than non-Hispanics (*Indicators 51* and *52, The Condition of Education 1999*), as do students in urban areas compared with those in suburban areas (*Indicator 28*).

### TRANSITION TO COLLEGE

Increasing numbers of high school graduates are entering college immediately after high school. In 1972, about half (49 percent) of all high school completers ages 16–24 enrolled in a 2- or 4-year college immediately after high school; in 1998, about two-thirds (66 percent) did so (*Indicator 32*). Enrollment rates increased faster for women than men, especially at 4-year institutions. In addition, the gap between white and black enrollment rates has decreased since 1984.

Despite high enrollment rates overall, high school graduates from all family backgrounds do not have equal access to postsecondary education. In 1998, high school completers from high-income families were considerably more likely to go to college immediately after high school (77 percent) than were their peers from low-income families (46 percent). High school completers were also much more likely to enroll in college immediately after high school if their parents had at least a bachelor's degree than if they had less education (*Indicator 32*).

One factor associated with lower rates of enrollment at 4-year institutions among low-income families is that they are less qualified academically (based on a "college qualification" index constructed using high school grade-point average, senior class rank, performance on a standardized test, SAT or ACT scores, and high school curriculum rigor). In 1992, 53 percent of high school graduates from low-income families (less than $25,000) were at least minimally academically qualified for admission, compared with 68 percent of those from middle-income families ($25,000–74,999) and 86 percent of those from high-income families ($75,000 or more) (*Indicator 30*).

# Summary: Student Effort and Academic Progress

However, there is evidence that the disadvantage of low income can be overcome. When low-income high school graduates who are college qualified take the steps required for admission to a 4-year institution (that is, apply and take the necessary tests), they are just as likely as their middle-income peers to enroll (*Indicator 31*).

Other disadvantages can be overcome as well. With the proper support, some students who are at risk for not completing high school do enroll in college. Among 1992 high school graduates with at least one risk factor, 35 percent not only completed high school but also enrolled in a 4-year college within two years of their high school graduation (*Indicator 33*). High aspirations, taking advanced courses, and receiving support from parents, friends, and their schools all contributed to their success.

## PERSISTENCE AND PROGRESS IN POSTSECONDARY EDUCATION

Degree/certificate completion is associated with increased employment opportunities and income potential (*Indicator 23*). Thus, it is useful to identify factors that promote students' likelihood of staying enrolled and attaining their goal (while recognizing, of course, that postsecondary attendance is an experiment for some students, and failure to persist is not always a negative outcome).

Overall, three-quarters of students who began their postsecondary education at a 4-year institution in 1995–96 were still enrolled at a 4-year institution (although not necessarily at the same one) three years later (*Indicator 35*). Certain characteristics put college students at risk for not persisting, including coming from a low-income family, having parents who did not attend college, and attending a higher poverty high school. One factor that helps these at-risk students persist in 4-year institutions is high school preparation for college-level work. At-risk students who completed the New Basics core curriculum in high school (four years of English and three years each of science, social science, and mathematics) were as likely to persist as their peers who were not at risk (*Indicator 35*).

Furthermore, there is evidence that lack of academic preparation in high school is detrimental to persistence. When students enter college lacking the reading and other skills needed to succeed in college-level work and are assigned to remedial courses in college, their likelihood of completing a bachelor's degree diminishes. Thirty-four percent of 1982 high school graduates who took any remedial reading coursework in college had completed a bachelor's or associate's degree by age 29–30, compared with 56 percent of those with no remedial courses (*Indicator 34*). The proportion of freshmen enrolled in a remedial course in reading, writing, or mathematics was 29 percent in fall 1995, about the same proportion as in 1989 (30 percent; *Indicator 29, The Condition of Education 1999*).

## COMPLETIONS

The overall educational attainment of the population has increased over time. In 1999, 88 percent of those ages 25–29 had earned a high school diploma or its equivalent; 66 percent of the high school completers in this age group had completed some college; and 32 percent had earned a bachelor's degree or higher. Several trends have been evident since the early 1970s: (1) female attainment rates have increased faster than those of males at all levels; (2) the black-white gap has narrowed for high school attainment, but has remained about the same for those completing some college and widened for those finishing college; and (3) Hispanic-white gaps still exist and have remained similar at all levels over time (*Indicator 38*).

# Student Attitudes and Aspirations

## Educational Plans

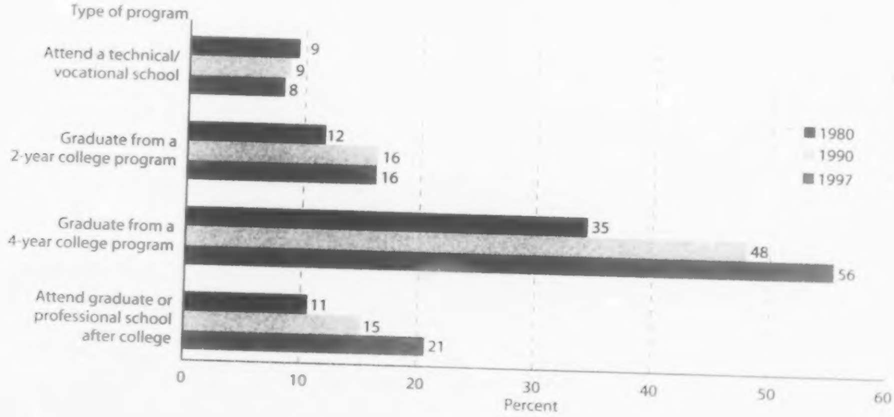
*Students' educational expectations have increased substantially since 1980.*

In a climate of rising standards and expectations beginning in the 1980s, increasing numbers of students have been completing college preparatory courses in high school and taking college entrance examinations such as the ACT and SAT (NCES 98–013, NCES 97–388, and NCES 96–304). Increasing proportions of students are also entering college and completing degrees (NCES 1999–022). Trends in high school seniors' expectations for postsecondary education provide another measure of this growing focus on postsecondary education.

The percentage of 12th-graders who said they "definitely will" complete a bachelor's degree increased considerably from 1980 to 1997 (from 35 to 56 percent). Furthermore, the proportion who said they "definitely will" attend graduate or professional school nearly doubled during the same period, from 11 to 21 percent. The percentage of students who definitely planned to complete a 2-year college program increased from 1980 to 1990, but that percentage did not change from 1990 to 1997. The percentage of 12th-grade students who definitely planned to attend a technical/vocational school declined slightly from 1980 to 1997.

Sex differences were evident as well. In all three years, women were more likely than men to report definite plans to complete 2-year degrees (see supplemental table 24-1). In 1980, there was no sex difference in the percentage with definite plans to complete a 4-year degree, but in 1997 females were more likely than males to have such plans. In 1980, males were slightly more likely than females to report definite plans to attend graduate/professional school, but in 1997 that sex difference was reversed (24 percent of females versus 17 percent of males) (see supplemental table 24-1).

**STUDENTS' EDUCATIONAL PLANS: Percentage of high school seniors who reported definite plans for postsecondary education, by type of program: 1980, 1990, and 1997**



NOTE: The response rates for this survey do not meet NCES standards. Students were asked how likely it was that they would participate in different types of postsecondary education. The response options were "definitely will," "probably will", "probably won't," and "definitely won't."

SOURCE: U.S. Department of Education, NCES. *Trends in Educational Equity for Girls and Women* (NCES 2000–030), 2000 (1980 and 1990 data); University of Michigan, Institute for Social Research, *Monitoring the Future Study* (1997 data).

FOR MORE INFORMATION

Supplemental Table 24-1

NCES 96–304, NCES 97–388, NCES 98–013, NCES 1999–022

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# Student Attitudes and Aspirations

## Attitudes About Mathematics

*Attitudes about mathematics differ across grades. Older students tend to be more negative than younger students. The attitudes of females, while similar to those of males at early grade levels, are more negative than those of males at higher grade levels.*

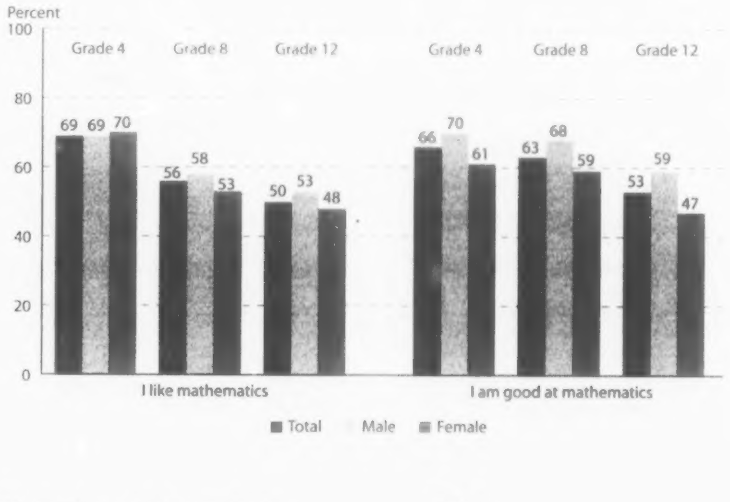
Students' attitudes about the subjects they study are often tied to performance. Such attitudes can affect enthusiasm for learning a subject and the effort devoted to studying it (Eccles 1994). When attitudes about mathematics were observed in 1990, 1992, and 1996, several interesting patterns emerged.

Older students tended to be more negative than their younger counterparts. Twelfth-graders, for example, were less likely than 4th- and 8th-graders to agree with the statements "I like mathematics" and "I am good at mathematics" in 1996. The size of the difference in the percentages of students who said they "like mathematics" was greater between grades 4 and 8 than it was between grades 8 and 12 in all three years. In contrast, the magnitude of the difference in the percentages of those who said they are "good at mathematics" was greater between grades 8 and 12 than between grades 4 and 8 in the last two years.

In addition, differences between males and females were also evident. Females generally exhibited less positive attitudes about mathematics than did males. In all three years, 4th-grade females were as likely as 4th-grade males to agree with the statement "I like mathematics." In grades 8 and 12, females were less likely to do so. At all three grade levels, females were less likely to agree with the statement "I am good at mathematics" (see supplemental table 25-1).

Although these patterns remained relatively consistent between 1990 and 1996, some change in attitudes occurred over the 6-year period. As an illustration, the percentage of 12th-grade students who agreed with the statements "I like mathematics" and "I am good at mathematics" decreased between 1990 and 1996. Over the same period, attitudes about these statements among 4th- and 8th-grade students remained relatively stable.

**STUDENT ATTITUDES: Percentage of students who agreed with statements about mathematics: 1996**



SOURCE: U.S. Department of Education, NCES. National Assessment of Educational Progress (NAEP), 1990, 1992, and 1996.

FOR MORE INFORMATION:
Supplemental Table 25-1
Eccles 1994

## Student Effort

# First-Time Kindergartners' Approaches to Learning

*Teachers report that two-thirds or more of kindergartners often or very often persist at tasks, pay attention, and seem eager to learn.*

The ways in which kindergartners approach and perform specific tasks in different situations contribute to variations in their skills and knowledge and their chances for success in learning (Kagan, Moore, and Bredekamp 1995). How the children perform reflects the myriad ways in which they become involved in learning and frame their thinking and behavior in learning situations. Consequently, differences in their knowledge and abilities can be observed by examining how they approach learning.

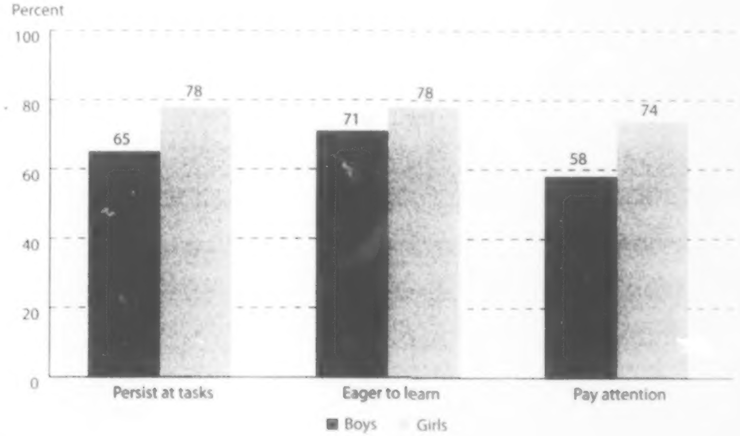
In 1998, kindergarten teachers reported that 71 percent of first-time kindergartners persisted at tasks, 75 percent seemed eager to learn, and 66 percent paid attention often or very often (see supplemental table 26-1).

Teachers' reports of kindergartners' approaches to learning differed by children's sex and family characteristics. For example, teachers perceived girls to be more likely than boys to persist at tasks, to be eager to learn, and to pay attention often or very often.

According to teachers' reports, children of mothers with lower levels of education were perceived as generally less likely than children whose mothers had higher levels of education to persist at tasks, to be as eager to learn, and to pay attention often or very often (see supplemental table 26-1).

Teachers reported that white and Asian children were more likely to be perceived as persisting at tasks, eager to learn, and to pay attention than black or Hispanic children. For example, 78 percent of white children were eager to learn often or very often, compared with 66 percent of black children (see supplemental table 26-1).

**APPROACHES TO LEARNING: Percentage of first-time kindergartners whose teachers reported that they persist at tasks, are eager to learn, and pay attention "often or very often," by sex: Fall 1998**



SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

FOR MORE INFORMATION:
Supplemental Note 3
Supplemental Table 26-1
Kagan, Moore, and Bredekamp 1995
NCES 2000-075

# Student Effort

## Credits Earned in High School

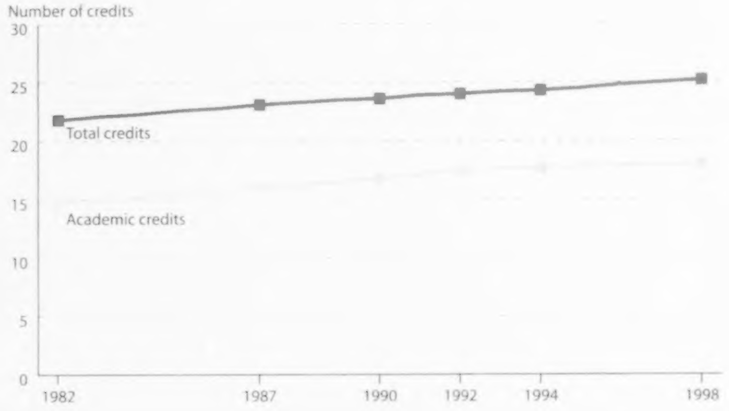
*High school graduates in 1998 accumulated about three more academic credits than graduates did in 1982.*

High school students are earning more credits than they did previously. In 1982, high school graduates earned about 22 credits during their high school careers. (One credit equals one year of a daily one-hour course.) By 1998, graduates earned about 25 credits, on average, during their high school careers (see supplemental table 27-1).

Students earn credits in academic subjects, such as mathematics, science, English, and social studies; vocational subjects, such as business, health occupations, and agriculture; and enrichment/other subjects, such as health/physical education, drivers' education, and military science. The increase over time in total credits earned resulted from an increase in the number of academic courses taken. High school graduates in 1982 earned, on average, 15 credits in academic subjects, compared with 18 credits in 1998. Thus, students are taking no fewer vocational and enrichment/other courses than in the past, but are taking more academic courses.

Increased academic coursetaking was particularly apparent among Hispanic students. In 1982, Hispanic graduates earned one and one-half academic credits fewer than did white graduates (see supplemental table 27-1). By 1998, this difference had disappeared. In contrast, generally there were differences between black and white graduates in the number of academic credits earned between 1982 and 1998.

**CREDITS EARNED: Average number of total and academic credits earned in high school: Selected years 1982–98**



SOURCE: U.S. Department of Education, NCES. High School and Beyond Longitudinal Study of 1980 Sophomores, "Second Follow-up" (HS&B 1980/1984), National Education Longitudinal Study of 1988 Eighth Graders, "High School Transcript Study" (NELS 1992), and 1987, 1990, 1994, and 1998 National Assessment of Educational Progress (NAEP) High School Transcript Studies.

FOR MORE INFORMATION:
Supplemental Note 3
Supplemental Table 27-1
NCES 1999–06

# Elementary/Secondary Progress

## Event Dropout Rates, by Urbanicity

*Students in urban areas are more likely than students in suburban areas to drop out of high school.*

Youth who do not complete high school tend to have substantially lower employment rates and earnings than their more educated peers (NCES 1999–022). Although the overall incidence of dropping out has declined since the early 1970s, dropout rates are higher for some subgroups of students than for others (NCES 1999–082).

There are several ways to calculate dropout rates. One, called the event dropout rate, is the proportion of students who were enrolled in one year who were not enrolled in the following year and did not earn a high school credential in the intervening year. According to this measure, four percent of all young people 15–24 years old who were enrolled in school dropped out of grades 10–12 in 1998. However, in urban areas, the dropout rate was about six percent, compared with about four percent in suburban areas. Students in urban areas also appeared to drop out at a higher rate than rural students, but the difference between the rates for these two groups is not statistically significant.

While the overall event dropout rate remained stable during the 1990s, the pattern varied according to community type. In particular, event dropout rates followed no consistent trend in urban areas, but increased slightly in suburban areas.

NOTE: Estimates for 1994 and 1995 were interpolated. Estimates may differ from those previously published.

SOURCE: U.S. Department of Commerce, Bureau of the Census. October Current Population Survey, various years, special tabulations.

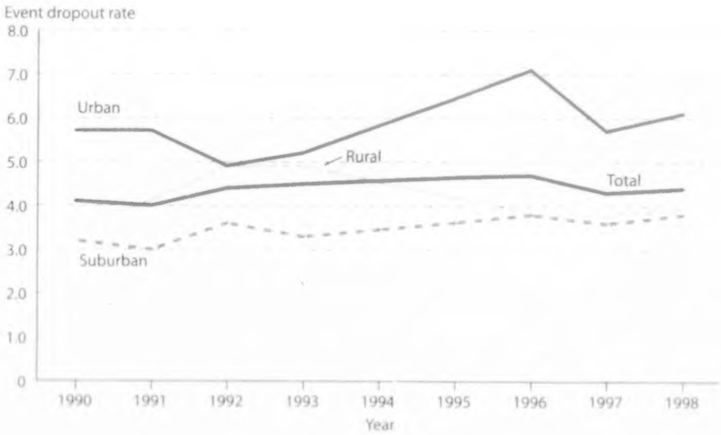
FOR MORE INFORMATION

Supplemental Note 3

Supplemental Table 28-1

NCES 1999–022, NCES 1999–082

**EVENT DROPOUT RATES: Event dropout rates for 15- to 24-year-olds in grades 10–12, by urbanicity: 1990–98**



# Elementary/Secondary Progress

## Later Completions by Dropouts

*Many former students reconsider their decision to drop out and return to school to earn a high school diploma or an alternative credential such as a GED.*

Completing high school helps prepare young people for the work force and further education. Among high school students who were sophomores in 1990, 88 percent completed high school by August 1992, and another seven percent were still enrolled at that time. The remaining six percent had dropped out.

Dropping out of high school does not always mark the end of a young person's secondary education. Many dropouts later receive a high school diploma or earn an alternative credential by passing the General Educational Development (GED) tests. More than half (58 percent) of dropouts from the 1990 sophomore cohort had either completed or re-enrolled in school within 2 years of their scheduled graduation.

Adding students who graduated on time, students who took longer than scheduled to finish, and dropouts who later completed brings the total completion rate for 1990 sophomores to 92 percent by spring 1994.

Students in the 1990 sophomore cohort were more likely than their counterparts a decade earlier to graduate on time (88 percent versus 80 percent), and if they dropped out, they were less likely to still be dropouts 2 years later (43 percent versus 66 percent).

Dropouts in the 1990 sophomore cohort with poor skills in mathematics (as indicated by test performance in the lowest quartile for their cohort) were less likely than their peers with better mathematics skills to have earned an alternative credential such as the GED within two years of their scheduled graduation (9 percent versus 16 percent) and were more likely to have remained dropouts (47 percent versus 34 percent).

**HIGH SCHOOL COMPLETION: Percentage distribution of 1980 and 1990 sophomores and dropouts according to completion status and percentage completing within 2 years of scheduled graduation, by mathematics achievement**

| | Status in August following scheduled high school graduation | | | Status of August dropouts in spring 2 years following scheduled graduation | | | | Total completed spring 2 years following scheduled graduation |
|---|---|---|---|---|---|---|---|---|
| | Completed[1] | Still enrolled[2] | Dropout | Graduated | Alternative credential | Enrolled in high school[2] | Still dropout | |
| | | | | 1990 sophomore cohort | | | | |
| Total | 87.5 | 6.9 | 5.6 | 15.1 | 11.0 | 31.4 | 42.5 | 92.2 |
| Mathematics achievement in 10th grade[3] | | | | | | | | |
| Lowest quartile | 74.6 | 13.0 | 12.4 | 12.9 | 8.5 | 31.9 | 46.7 | 82.2 |
| Above lowest quartile | 93.2 | 4.2 | 2.6 | 19.9 | 16.1 | 30.4 | 33.6 | 96.6 |
| | | | | 1980 sophomore cohort | | | | |
| Total | 80.1 | 10.0 | 9.9 | 8.4 | 11.8 | 13.5 | 66.4 | 89.6 |
| Mathematics achievement in 10th grade[3] | | | | | | | | |
| Lowest quartile | 67.0 | 14.5 | 18.5 | 8.4 | 8.6 | 15.0 | 68.0 | 80.1 |
| Above lowest quartile | 89.1 | 6.9 | 4.1 | 8.4 | 20.8 | 9.2 | 61.6 | 95.8 |

[1] Includes those who graduated from high school and those who received an alternative credential.

[2] Enrolled in a regular high school or alternative program.

[3] Based on tests administered as part of the survey.

NOTE: Percentages may not add to 100.0 due to rounding.

SOURCE: U.S. Department of Education, NCES. High School and Beyond Longitudinal Study of 1980 Sophomores, "Second Follow-up" (HS&B: 1980/1984) and National Education Longitudinal Study of 1988 Eighth Graders, "Third Follow-up" (NELS: 1988/1994).

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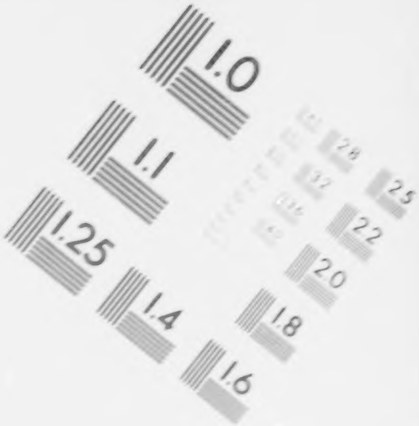

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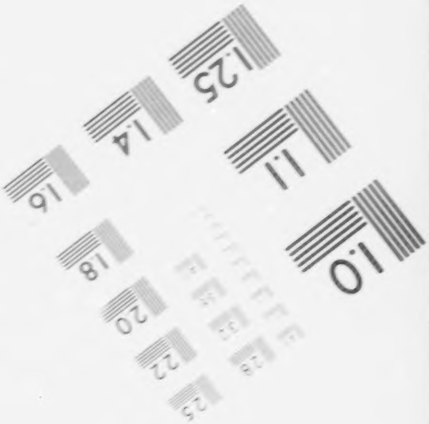

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# Transitions to College

## Who Is Prepared for College

*High school graduates from low-income families are less likely to be qualified academically to enter 4-year institutions than their peers from higher income families.*

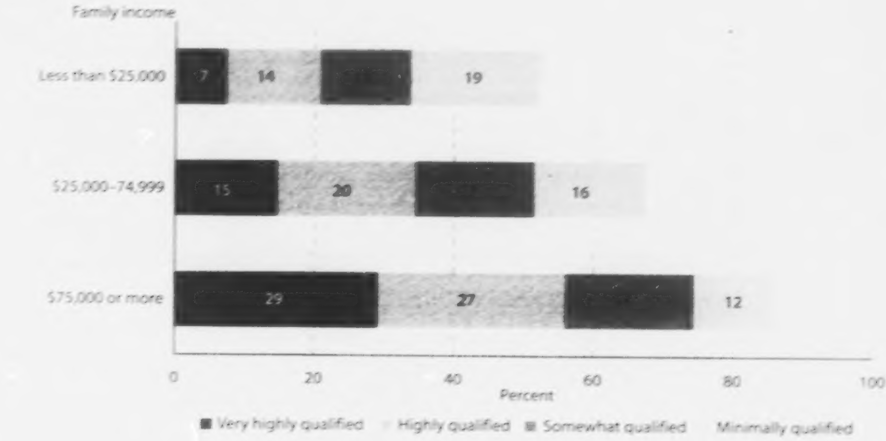
High school graduates from low-income families enter 4-year institutions at lower rates than their higher income peers (NCES 98–105). While financial barriers to college attendance exist for many low-income students, one reason for their lower enrollment rate is that they are less qualified academically. Eighty-six percent of 1992 high school graduates from families with high incomes ($75,000 or more) were at least minimally academically qualified for admission to a 4-year institution, compared with 68 percent of those from middle-income ($25,000–74,999) and 53 percent from low-income (less than $25,000) families. (See *Supplemental Note 9* for more information about the College Qualification Index.) Moreover, high-income graduates were almost twice as likely as middle-income graduates and four times as likely as low-income graduates to be very highly qualified for 4-year college admission. The proportion of college-qualified students was also directly related to their parents' educational attainment (NCES 98–105).

Asian/Pacific Islander and white graduates have higher average family income and parental education levels than their black and Hispanic counterparts (NCES 98–105). Reflecting this pattern, they were more likely than black and Hispanic graduates to be at least minimally qualified for 4-year college admission (see supplemental table 30-1). The proportion of very highly qualified graduates was largest among Asians/Pacific Islanders.

NOTE: The 4-year College Qualification Index is based on high school GPA, senior class rank, NELS 1992 aptitude test, SAT or ACT scores, and curricular rigor.

SOURCE: U.S. Department of Education, NCES, National Education Longitudinal Study of 1988 Eighth Graders, "Third Follow-up" (NELS:1988/1994).

**QUALIFIED FOR COLLEGE: Percentage of 1992 high school graduates qualified for admission at a 4-year institution, by level of qualification and family income**



FOR MORE INFORMATION:
Supplemental Note 9
Supplemental Table 30-1
NCES 98–105

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# Transitions to College

## Who Enrolls in Postsecondary Education

*Enrollment rates of high school graduates vary with family income, but among those who are college-qualified and take the steps necessary for admission, low-income students are just as likely as middle-income students to enroll in a 4-year institution.*

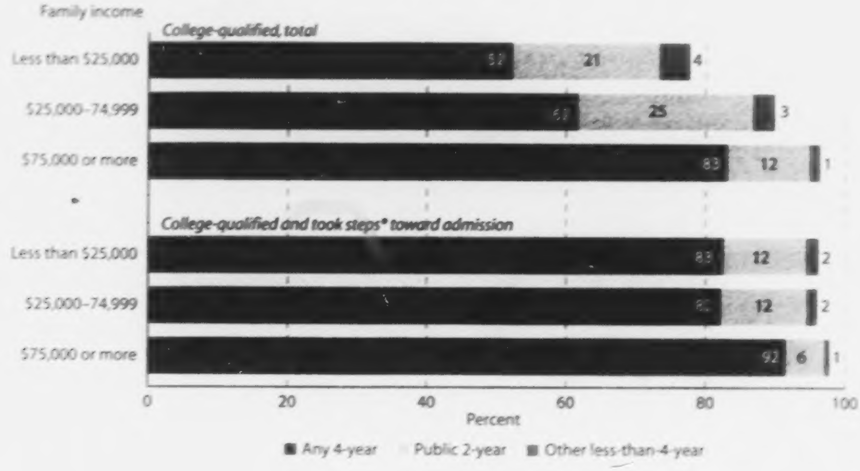
The higher the family income of high school graduates, the more likely they are to enroll in postsecondary education. Among 1992 graduates as a whole, the proportion who enrolled in 4-year institutions by 1994 increased at each family income level, from 33 percent of low-income students to 47 percent of middle-income students to 77 percent of high-income students (NCES 98–105).

However, financial resources are not the only obstacle to enrollment for students from low-income families. High school graduates from low-income families are less likely to enroll in college because they tend to be less qualified (*Indicator 30*). Nevertheless, even among college-qualified graduates, enrollment rates in 4-year or any postsecondary institutions within two years of graduating from high school increased with family income.

In addition to being college qualified, students wanting to enter a 4-year institution take additional steps, defined here as taking a college admissions test and applying for admission. Some of the income-related differences in enrollment rates disappeared among those who were both college qualified and took these two steps. High school graduates from families with low and middle incomes were equally likely to enroll in a 4-year institution or in any postsecondary institution within two years of high school graduation (83 and 82 percent, respectively).

A large majority (83 percent) of low-income high school graduates who were both college qualified and took the two steps toward admission were able to attend a 4-year institution. Financial or other reasons did not deter them from enrolling.

**POSTSECONDARY ENROLLMENT: Percentage of college-qualified 1992 high school graduates who enrolled in postsecondary education by 1994, by type of institution and family income**



*Took a college admissions test (SAT or ACT) and applied for admission to a 4-year institution.

NOTE: The 4-year college qualification index is based on high school GPA, senior class rank, NELS 1992 aptitude test, SAT or ACT scores, and curricular rigor. See Supplemental Note 9 for further information about the College Qualification Index. Type of institution attended refers to first institution attended.

SOURCE: U.S. Department of Education, NCES, National Education Longitudinal Study of 1988 Eighth Graders, "Third Follow-up" (NELS: 1988/1994).

FOR MORE INFORMATION
Supplemental Note 9
NCES 98–105

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# Transitions to College

## Immediate Transition to College

*Immediate college enrollment rates have been increasing since 1972. From 1984 to 1998, increases in female enrollment at 4-year institutions contributed to overall growth in enrollment rates. The gap between white and black enrollment rates has decreased since 1984.*

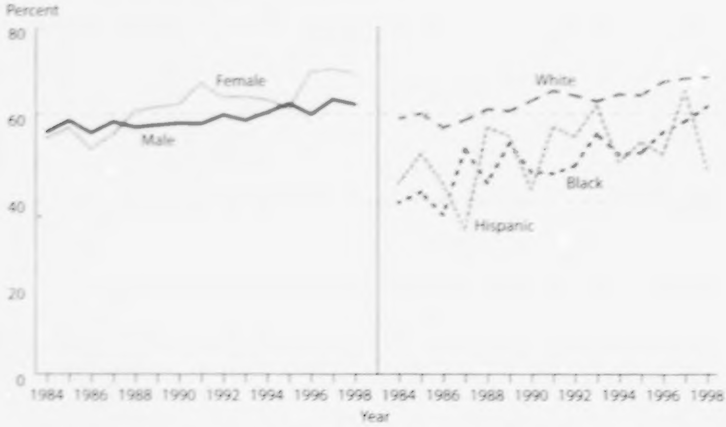
The percentage of high school completers who enroll in college in the fall immediately after high school reflects the accessibility of higher education and the value high school completers place on college compared with other pursuits. Overall, immediate college enrollment rates of high school completers increased from 49 to 66 percent between 1972 and 1998 (see supplemental table 32-1).

From 1972 to 1998, immediate enrollment rates of female high school completers increased faster than those of males. Much of the growth in immediate college enrollment rates between 1984 and 1998 was due to increases in the immediate enrollment rates of females at 4-year institutions. The rates at which females enrolled in 4-year institutions increased faster than those of males and faster than those of females at 2-year institutions (see supplemental table 32-3).

Immediate enrollment rates for white high school completers have increased over the past 27 years, from 50 to 69 percent. Among black high school completers, immediate enrollment rates fluctuated between 1972 and 1983, and then increased between 1984 and 1998, rising from 40 to 62 percent (see supplemental table 32-1). Since 1984, immediate enrollment rates for blacks have increased faster than those for whites, closing the gap between the two groups. For Hispanic high school completers, there was no consistent growth in rates between 1972 and 1998.

Some differences in immediate enrollment rates among groups of completers have not changed. The gap in rates of those from high- and low-income families persisted for each year between 1990 and 1998. Likewise, completers whose parents had attained a bachelor's degree or higher were more likely than those with parents who had less education to enter college immediately after high school graduation for each year between 1990 and 1998 (see supplemental table 32-2).

**IMMEDIATE ENROLLMENT: Percentage of high school completers who were enrolled in college the October after completing high school, by sex and race-ethnicity: October 1984–98**



NOTE: Includes high school completers in a given year from 16–24 years of age. In 1994 the survey methodology for the Current Population Survey (CPS) was changed and weights were adjusted.

SOURCE: U.S. Department of Commerce, Bureau of the Census. October Current Population Surveys.

BEST COPY AVAILABLE

FOR MORE INFORMATION:
Supplemental Note 1, 2
Supplemental Tables 32-1, 32-2, 32-3
"Overview of the Condition of Education" essay from The Condition of Education 1999 (NCES 1999-022)

# Transitions to College

## Enrollment of Students With Risk Factors

*About one-third of young people at risk for low educational attainment are able to persist in high school and enroll in a 4-year college despite being disadvantaged.*

Some students who enter high school with risk factors associated with dropping out nonetheless graduate from high school and enroll in postsecondary education. About 58 percent of all 1992 high school graduates had at least one factor in their family background or school experiences prior to entering high school that placed them at some risk of lower educational attainment. However, 35 percent of these graduates with risk factors not only finished high school, but also enrolled in a 4-year college or university within two years of their high school graduation (and 68 percent enrolled in some type of postsecondary institution).

Why were some students with risk factors able to make it to college while others were not? Many factors may have contributed to their success, including academic preparation, family background, and support from schools, parents, and friends.

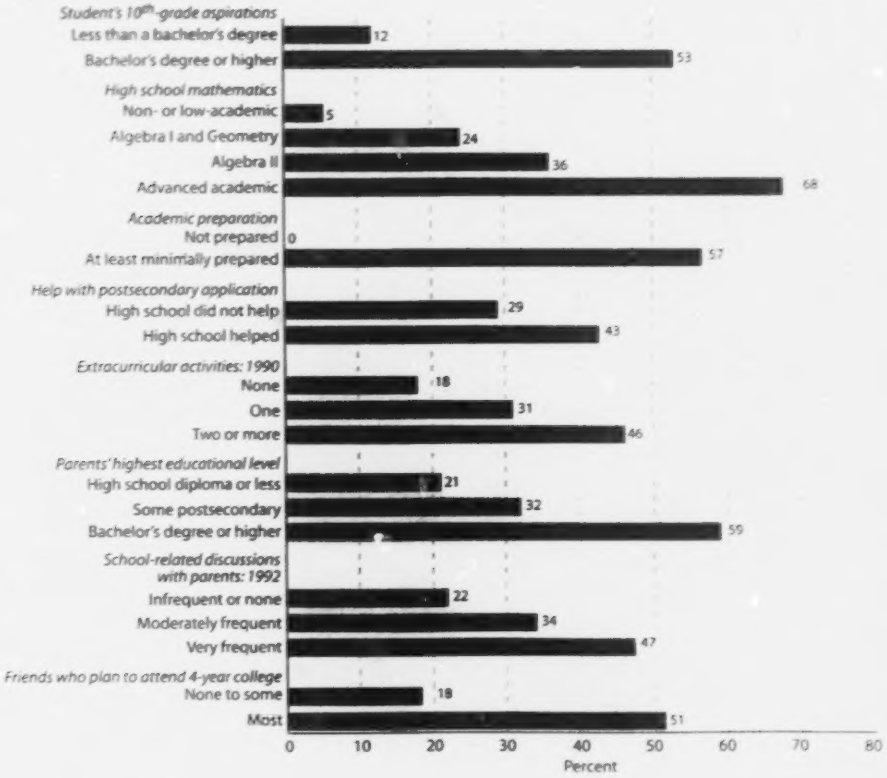
Students with risk factors who aspired in 10th grade to earn at least a bachelor's degree, were at least minimally academically prepared for enrollment in a 4-year college, and got help with college applications from their school were more likely to enroll in a 4-year college than those who did not. In addition, those who completed at least one advanced mathematics course and those who participated in two or more extracurricular activities in 10th grade were more likely than others to enroll in a 4-year college. Also, students whose parents discussed school and college matters at least moderately frequently during 12th grade and those with parents who had completed a bachelor's degree were more likely to enroll in a 4-year college than those whose parents were not in these categories. Finally, when most of the friends of a student with risk factors planned to enroll in a 4-year college, the student was more likely than other students with risk factors to do so as well.

A multivariate analysis confirmed that the positive association between enrolling in a 4-year college and each of these characteristics persists even after controlling for the interrelationships of the characteristics.

**TRANSITION TO COLLEGE: Percentage of 1992 high school graduates, with risk factors for low educational attainment, and percentage distribution according to type of institution first enrolled**

| Risk factors | Percent of all students | Type of institution first enrolled[a] 4-year | Public 2-year | Other less-than-4-year | Never enrolled |
|---|---|---|---|---|---|
| Number of risk factors | | | | | |
| No risk factors | 42.2 | 63.5 | 21.9 | 2.4 | 12.2 |
| Any risk factors | 57.8 | 35.0 | 27.3 | 5.7 | 32.0 |
| One risk factor | 32.2 | 45.1 | 26.0 | 5.2 | 23.8 |
| Two risk factors | 16.3 | 27.0 | 28.4 | 5.9 | 38.7 |
| Three or more risk factors | 9.3 | 14.0 | 29.7 | 7.1 | 49.2 |
| Risk factors | | | | | |
| Changed schools 2 or more times from 1st to 8th grade (except to next level) | 26.8 | 39.8 | 28.0 | 6.1 | 26.1 |
| Lowest SES quartile | 18.2 | 21.7 | 25.2 | 6.3 | 46.8 |
| Average grades C's or lower from 6th to 8th grade | 16.7 | 16.3 | 29.8 | 7.7 | 46.2 |
| Single-parent household in 8th grade | 15.3 | 38.6 | 28.1 | 4.7 | 28.7 |
| One or more older siblings left high school | 11.2 | 25.7 | 28.7 | 5.5 | 40.1 |
| Held back one or more grades from 1st to 8th grade | 11.2 | 20.6 | 30.0 | 5.3 | 44.2 |

**TRANSITION TO COLLEGE: Percentage of 1992 high school graduates with risk factors who enrolled in a 4-year college by 1994, by selected student characteristics**



NOTE: Percentages may not add to 100.0 due to rounding.

SOURCE: U.S. Department of Education, NCES. National Education Longitudinal Study of 1988 Eighth Graders (NELS:1988/1994), Data Analysis System.

FOR MORE INFORMATION:
Supplemental Notes 1, 11
NCES 98–094

# Postsecondary Persistence and Progress

## Remediation and Degree Completion

*Students who take any remedial reading courses are less likely to earn a 2- or 4-year degree than those who take other combinations of remedial courses.*

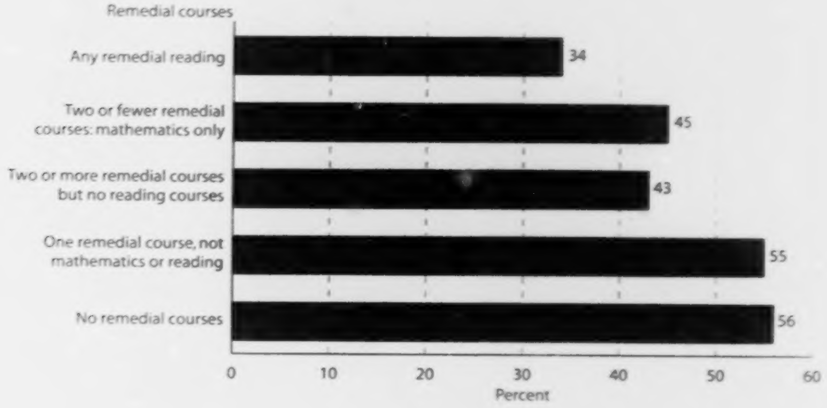
The role of remedial coursework in postsecondary education has been the subject of continuing debate among policymakers and educators. The core questions being addressed are what kinds of institutions should offer remedial coursework and how remedial coursework affects degree completion. The postsecondary education transcripts of a cohort of students who graduated from high school in 1982 and were followed until they were 29 to 30 years old provide an opportunity to examine the relationship between degree completion and remedial coursework patterns.

Assignment to remedial reading in college is associated with additional remediation and a lower likelihood of degree completion. Among the students who took any remedial reading, 42 percent were in three or more other remedial courses, and 67 percent took remedial mathematics (see supplemental table 34-2). In contrast, among the students who took any remedial mathematics courses, 16 percent were in three or more remedial courses, and 24 percent took remedial reading.

Students who took only one remedial course (other than remedial mathematics or reading) completed degrees at the same rate as students who took no remedial courses (55 and 56 percent, respectively). Students whose only remedial requirement was mathematics and who took a maximum of two remedial courses completed associate's or bachelor's degrees at a higher rate (45 percent) than students with any reading problems (34 percent).

A higher percentage of community college students than 4-year college students are assigned to remedial courses. Sixty-three percent of students who attended only a 2-year college and 64 percent of those who attended both a 2-year college and a 4-year college took at least one remedial course, compared with 40 percent of those who attended only a 4-year college (see supplemental table 34-3).

**REMEDIATION AND COMPLETION: Percentage of postsecondary education students with varying patterns of remedial courses who complete 2- or 4-year degrees: 1980–93**



NOTE: The patterns of remedial coursework are mutually exclusive, starting with "any reading" and proceeding downward. Thus, no student included in a pattern is included in any pattern below. Students who attended only sub-baccalaureate vocational/technical schools are not included.

SOURCE: U.S. Department of Education, NCES. High School and Beyond Longitudinal Study of 1980 Sophomores, "Postsecondary Education Transcript Study" (HS&B So: PETS).

FOR MORE INFORMATION:
Supplemental Note 10
Supplemental Tables 34-1, 34-2, 34-3

# Postsecondary Persistence and Progress

## Persistence Toward a Bachelor's Degree

*Students with risk factors are as likely as those without them to remain enrolled in a 4-year institution after 3 years if they completed at least the New Basics curriculum in high school.*

Among students who began their postsecondary education at a 4-year institution in 1995–96, three-fourths were enrolled at the same or another 4-year institution three years later (NCES 2000–154). Certain characteristics put students at risk for not persisting. However, their likelihood of persisting improved if they completed at least the New Basics curriculum (recommended in *A Nation at Risk* by the National Commission on Excellence in Education) in high school.

For this analysis, risk factors for not persisting included coming from a low-income family, having neither parent going beyond high school, or attending a high school in which 25 percent or more of the students were eligible for free or reduced-price lunches. (For more details, see *Supplemental Note 11*.) Three years after entering a 4-year institution, students with one or more risk factors were less likely than those without any risk factors to be enrolled at any 4-year institution (67 percent versus 79 percent).

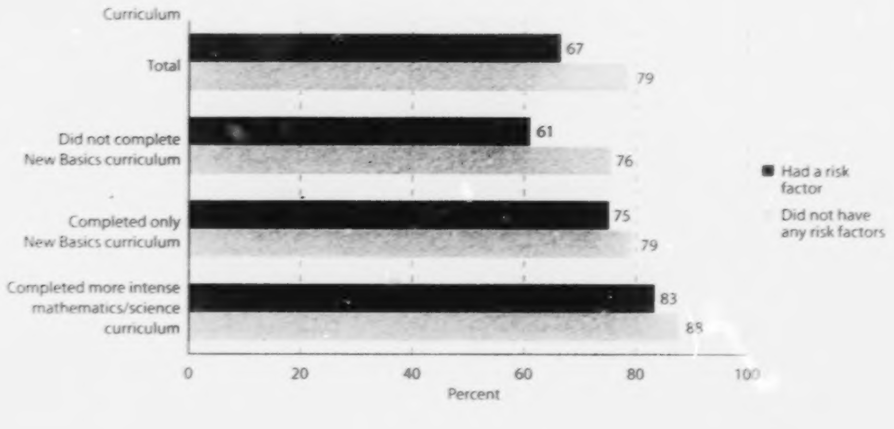
When high school curriculum is taken into account, however, the relationship changes. Having risk factors was related to persistence only among students who did not complete the New Basics curriculum. The likelihood of persisting in a 4-year institution for students who had completed the New Basics curriculum or who completed a more intense curriculum including four years of both mathematics and science and two years of a foreign language did not differ meaningfully for students with and without risk factors.

NOTE: The New Basics curriculum includes 4 years of English and 3 years each of mathematics, science, and social sciences. High school curriculum is based on the courses completed or planned, as reported by students applying to take the SAT I (Scholastic Assessment Test) or ACT (American College Testing) assessment. Of all beginning students at 4-year institutions, 90 percent took the SAT I or ACT assessment.

SOURCE: U.S. Department of Education, NCES. 1996 Beginning Postsecondary Students Longitudinal Study "First Follow-up" (BPS: 1996/1998).

FOR MORE INFORMATION:
Supplemental Note 11
NCES 2000–154

**PERSISTENCE IN COLLEGE: Percentage of students beginning postsecondary education at 4-year institutions in 1995–96 who were enrolled at any 4-year institution 3 years later, by presence of risk factors and curriculum completed**



# Postseconday Persistence and Progress

## Sex Differences in Graduate/Professional Enrollment

*Male and female bachelor's degree recipients in 1992–93 were equally likely to have enrolled in a graduate or first-professional program by 1997, but they chose different fields of study.*

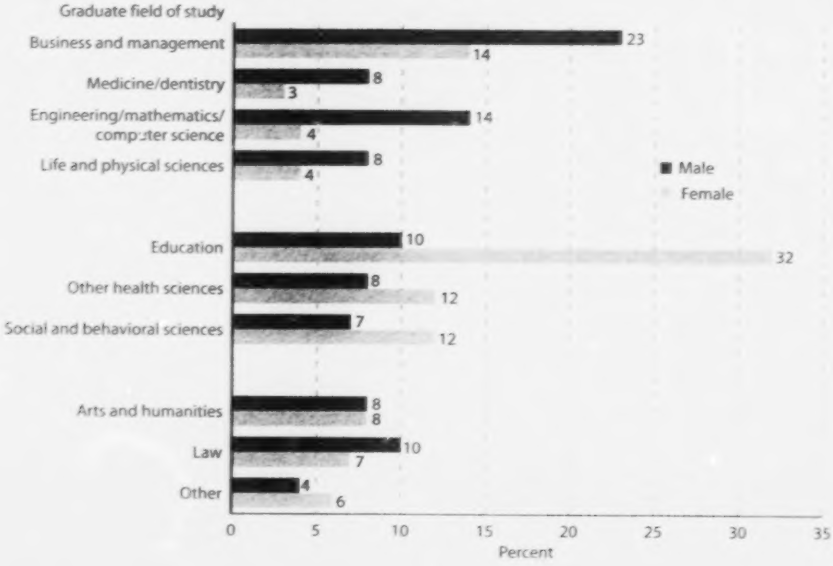
By 1997, the same percentages of the men and women who had earned bachelor's degrees in 1992–93 had applied for admission to an advanced degree program (41 percent), been accepted (35 percent), and enrolled (30 percent) (NCES 1999–155).

Sex differences were pronounced in the fields of study chosen, however, with men being more likely than women to enroll in business and management; medicine or dentistry; engineering, mathematics, or computer science; and life and physical sciences.

Women were more likely than men to enroll in education, in health sciences other than medicine or dentistry, and in social and behavioral sciences. Enrollment rates in law, arts and humanities, and "other" fields did not differ significantly by sex.

Enrollment in specific degree programs differed by sex. Men were more likely than women to enroll in MBA programs (14 versus 6 percent), doctoral programs (13 versus 7 percent), and first-professional programs (18 versus 10 percent) (NCES 1999–155). In contrast, women were more likely than men to enroll in nonMBA master's degree programs (76 versus 54 percent).

**GRADUATE FIELDS: Percentage distribution of 1992–93 bachelor's degree recipients who enrolled in a graduate or first-professional progam by 1997 according to graduate field of study, by sex**



NOTE: If students enrolled in more than 1 program, the field corresponding to the highest level program is shown. The glossary includes a list of degrees defined as first-professional. Percentages may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, NCES. Baccalaureate and Beyond Longitudinal Study, "Second Follow-up" (B&B:1993/1997), Data Analysis System.

FOR MORE INFORMATION:
NCES 1999–155

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# Completions

## Degrees Earned by Women

*Women earn more than half of all bachelor's degrees. They still trail men in certain fields but have made considerable progress over the past quarter century.*

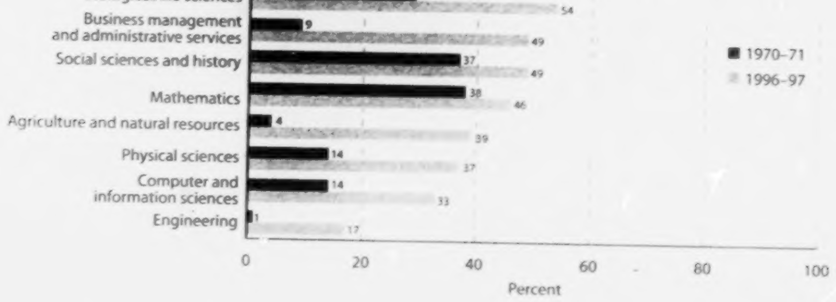
Many efforts have been made to improve educational opportunities for women, and the results are evident in degree attainment. In 1970–71, women earned 43 percent of all bachelor's degrees. They made gradual gains throughout the 1970s, and in each year since the early 1980s, they have earned more than half of all the bachelor's degrees awarded. In 1996–97, they earned 56 percent of the bachelor's degrees awarded.

In certain fields (health professions and related sciences, education, English, and visual and performing arts), women earned a majority of bachelor's degrees in both 1970–71 and 1996–97. In others (psychology, communications, and biological/life sciences), they earned a majority of the degrees in 1996–97, but not in 1970–71. In business management and administrative services, social sciences and history, and mathematics, women have made modest or considerable gains and now earn almost half of all bachelor's degrees in these fields.

In 1996–97, women still earned considerably less than half the bachelor's degrees in the traditionally male-dominated fields of agriculture/natural resources (39 percent), physical sciences (37 percent), computer and information sciences (33 percent), and engineering (17 percent). Nevertheless, they have made substantial gains in all of these fields since 1970–71.

Women have made progress at the graduate level as well (see supplemental table 37-1), although one-third or less of the master's recipients in 1996–97 in physical sciences, computer and information sciences, and engineering were women. At the doctoral level, women received less than one-third of the degrees awarded in 6 out of the 15 degrees fields shown, and less than one-half of the degrees awarded in 10 out of 15 fields shown.

**BACHELOR'S DEGREES: Percentage of bachelor's degrees earned by women, by field of study: 1970–71 and 1996–97**



* Includes other fields of study not shown separately.

SOURCE: U.S. Department of Education, NCES. 1970–71 Higher Education General Information Survey (HEGIS), "Degrees and Other Formal Awards Conferred" survey and 1996–97 Integrated Postsecondary Education Data System (IPEDS), "Completions" survey.

FOR MORE INFORMATION:
Supplemental Note 12
Supplemental Table 37-1

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# Completions

## Educational Attainment

***Completion rates of 25- to 29-year-olds increased across all educational levels, for all racial-ethnic groups, and for males and females from 1971 to 1999.***

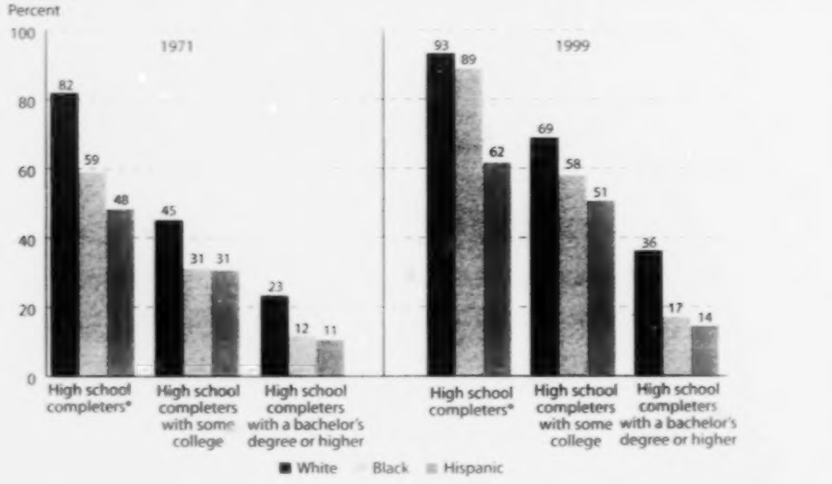
The percentage of 25- to 29-year-olds who completed at least high school rose from 78 percent in 1971 to 88 percent in 1999 (see supplemental table 38-1). Over the same period, the percentage of high school completers in this age group who also completed at least some college increased from 44 to 66 percent (see supplemental table 38-2), and the percentage who obtained a bachelor's degree or higher rose from 22 to 32 percent (see supplemental table 38-3).

From 1971 to 1999, the gap in the rates at which blacks and whites completed at least high school began to close. In earlier years, the completion rate of blacks was 72 percent of that of whites, while in 1999, it was 95 percent that of whites. In contrast, the gap in attainment between white and black high school completers with at least some college remained similar, and the gap between blacks and whites who completed college widened (see supplemental tables 38-1, 38-2, and 38-3).

Among Hispanics, there were increases in completion rates across all levels of education between 1971 and 1999. Nonetheless, the differences in attainment rates between whites and Hispanics remained about the same at every educational level.

Among those ages 25–29 in 1971, females had lower completion rates than males at every educational level above high school. Between 1971 and 1999, however, the educational attainment rates of females increased faster than those of males. By 1999, as a result, females had higher rates than males for completing high school and some college. In addition, there were no differences in the percentages of males and females with a bachelor's degree or higher in that year.

**EDUCATIONAL ATTAINMENT: Percentage of 25- to 29-year-olds attaining selected levels of education, by race-ethnicity: March 1971 and 1999**



* Included in high school completers with some college or a bachelor's degree or higher.

NOTE: The Current Population Survey (CPS) questions used to obtain educational attainment were changed in 1992. In 1994, the methodology for the CPS was changed and weights were adjusted.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys, 1971 and 1999.

FOR MORE INFORMATION:
Supplemental Notes 1, 3
Supplemental Tables 38-1, 38-2, 38-3

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# Section 4

# *Quality of Elementary and Secondary Educational Environments*

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# Summary: Quality of Elementary and Secondary Educational Environments

Elementary and secondary education is designed to provide children with the academic knowledge and skills they need to function successfully in society and to prepare them to pursue further education, to enter the workforce, and to be responsible, active citizens. If students do not receive the knowledge and skills they need to be productive, then the schools have not succeeded in their mission. Examining the characteristics of schools that are related to student learning can help to illuminate some of the reasons why students are learning or not. In 1991, an NCES Special Study Panel on Education Indicators called for a "dual focus on both learner outcomes and the quality of the national educating institutions" (U.S. Department of Education 1991).

School quality as it affects student learning may involve many different characteristics of schools, each of which may be interrelated and not one of which alone predetermines learning. These characteristics may include the courses that students take and the academic standards that teachers and administrators set, the learning opportunities afforded to students, teachers' qualifications and training, and administrators' ability to provide a safe and disciplined school environment, as well as the physical and human resources at schools. Indicators on these aspects of the elementary and secondary educational environment are included in this section.

## COURSETAKING AND STANDARDS

One of the most important factors contributing to the education that students receive is the kinds of courses they take. In 1983, the National Commission on Excellence in Education (NCEE) proposed that all high school students seeking a diploma be required to complete the "New Basics" core curriculum, which required students to complete more coursework in mathematics, science, English, social studies, and other course areas by the time they graduated from high school than many students at the time had completed (National Commission on Excellence in Education 1983). For example, between school years 1987–88 and 1993–94, the percentage of public school districts with high school graduation requirements that met or exceeded the NCEE's recommendations of four years of English and three years each of social studies, science, and mathematics increased (NCES 98–013). Since 1983, the percentage of high school graduates who completed advanced mathematics and science courses has increased. In 1982, 5 and 6 percent of high school graduates, respectively, (or 11 percent combined) completed mathematics courses at Advanced academic Levels II and III (the most advanced levels of coursetaking that include such mathematics courses as trigonometry, precalculus, and calculus). In 1998, 15 and 12 percent of high school graduates, respectively (or 27 percent combined) completed mathematics courses at those levels. The percentages of high school graduates who completed advanced courses in science were also higher in 1998 than in 1982 (*Indicator 40*).

However, in 1998, not all student groups took challenging mathematics and science coursework at the same rate. Asian/Pacific Islander and white high school graduates, private school graduates, and those who completed the New Basics curriculum were usually more likely than others to complete advanced levels of mathematics and science coursework (*Indicator 39*).

Although there has been progress in advanced course-taking patterns in U.S. schools, some evidence exists that the quality of U.S. educational instruction in mathematics may lag behind that of other countries. Data collected for the Third International Mathematics and Science Study (TIMSS) show that the content of mathematics lessons taught to 8th-grade students in the United States was more likely to

# Summary: Quality of Elementary and Secondary Educational Environments

**Continued**

be rated of the lowest quality when compared with lessons taught to students in Japan and Germany. Thirty-nine and 28 percent, respectively, of Japanese and German mathematics lessons received the highest quality rating, whereas no lessons from the United States received such a rating (*Indicator 44*). Further, 8th-grade mathematics lessons in the United States differed from those in Germany and Japan in instructional processes: 83 percent of U.S. lessons contained only "task-controlled" tasks in which the teacher demonstrated a particular solution method to students and asked them to replicate that solution, as opposed to "student-controlled" tasks in which the teacher encouraged students to find alternative solution approaches on their own. Forty-eight percent of German lessons and 17 percent of Japanese lessons contained only "task-controlled" tasks. In addition, Japanese teachers emphasized mathematical thinking among students more often than did their American counterparts. The relative quality of lessons taught in the United States, compared with those taught in other countries, may be related to the relatively poor performance of U.S. students in mathematics and science at the end of secondary school, compared with students from other countries (NCES 1999–022).

### Learning Opportunities

Many factors may influence learning opportunities in elementary and secondary schools, such as the number of students in a classroom, the amount of individualized attention a student receives from a teacher, and a student's access to technology in the school.

Small class sizes may bring increased opportunity for classroom contact between students and teachers and may enhance students' learning opportunities by allowing them more one-on-one contact with a teacher (NEA 2000). The National Education Association (NEA) recommends no more than 15 students per class for kindergarten through 3rd grade. In 1998, kindergarten classrooms in public schools averaged 20 students per teacher, whereas kindergarten classrooms in private schools averaged 18 students. Fifteen percent of public school kindergarten classrooms have 15 or fewer students, compared with 41 percent of private school kindergarten classrooms (*Indicator 41*). Although student/teacher ratios are not a direct measure of class size, they do provide an indirect means of assessing the possibility of contact between students and teachers. Student/teacher ratios in elementary and secondary schools were smaller in 1998 than in 1970 (*Indicator 43*).

Computers and related technology provide an alternate way for students to learn and obtain information and are an increasingly available educational resource. In 1999, 95 percent of public elementary and secondary schools had Internet access (NCES 2000–086), and 78 percent of students in grades 1–12 reported using the Internet at school (*Indicator 45*).

### School Choice

By choosing the school that their children attend, parents may perceive that they can influence the quality of education their children receive. In addition, with parents choosing their children's school, schools may be prompted to compete for enrollments by improving the programs they offer (Viteritti 2000).

Since 1991, the popularity of school choice has grown among the general public. In 1996, 69 percent of the public favored allowing students and their parents to choose which public schools in the community students attend, regardless of where they live; 44 percent favored allowing students and their parents to choose a private school over the public one, up from 26 percent in 1991 (NCES 1999–036). In 1999, more children in grades 3–12 attended schools

## Summary: Quality of Elementary and Secondary Educational Environments

**Continued**

chosen by their parents (either public or private schools) than in 1993 (24 versus 20 percent) (*Indicator 46*).

Recent data show that a decreasing proportion of parents report satisfaction with assigned public schools, especially at the secondary level. The percentage of children who attended an assigned public school whose parents were very satisfied with the child's school, teachers, and the school's academic standards decreased between 1993 and 1999. In 1999, private schools had the highest percentages of children with parents who were very satisfied with the child's school, teachers, the school's academic standards, and discipline, followed by chosen public schools and by assigned public schools. For all public schools, a higher percentage of children in grades 3–5 had parents who were very satisfied than did children in grades 9–12 (*Indicator 46*).

### TEACHERS AND TEACHER CHARACTERISTICS

Teachers must have a thorough grounding in the subjects they teach so they can guide their students effectively through the material and respond knowledgeably to questions and comments. The basis of their knowledge comes from their prior education, as signified by the degrees and certifications they earn. In 1998, 38 percent of full-time public school teachers held academic degrees at the bachelor's or graduate level. Teachers with three or fewer years of teaching experience were more likely than more experienced teachers to hold academic degrees. In 1998, virtually 100 percent of public school teachers had earned a bachelor's degree; 45 percent had earned a master's degree; and at least 90 percent had earned regular or standard state certificates or advanced professional certificates (*Indicator 47*). Many teachers also participate in professional development to increase their skills and knowledge. In 1998, the percentage of full-time public school teachers who participated in various development activities in the past 12 months ranged from 81 to 31 percent, depending on the type of activity (*Indicator 48*).

While there is some evidence that the Nation's teachers are educated and strive to increase their skills and learn new techniques through professional development activities, there is evidence that their salaries are not competitive with those of workers in other professions. Elementary and secondary teachers earned less in 1998 than workers in other professions with bachelor's degrees (*Indicator 25, The Condition of Education 1999*).

### SCHOOL SAFETY AND DISCIPLINED ENVIRONMENTS

In recent years, policymakers, educators, parents, and students increasingly have voiced concern about the incidence of school-related criminal behavior. Responses to such concern include enactment of the Gun-Free Schools Act (GFSA; Sinclair 1999) and zero-tolerance policies against violent behavior and drug use in order to maintain orderly and safe schools.

Although concern has grown, data show that high school student reports of various victimizations and violent behaviors have not increased in recent years, use of several types of drugs at schools has decreased, and most public school teachers feel prepared to maintain order and discipline in their classrooms. Victimization rates at school for high school seniors changed little between 1976 and 1997. In 1997, victimization rates ranged from 5 percent (the percentage of high school seniors who reported being injured with a weapon at school during the previous 12 months) to 39 percent (the percentage of seniors who reported having something stolen at school during the past 12 months) compared with 6 to 38 percent, respectively, in 1976 (NCES 1999–022). Between 1976 and 1998, the percentage of high school seniors who reported using alcohol,

# Summary: Quality of Elementary and Secondary Educational Environments

Continued

marijuana, stimulants, cocaine, or tranquilizers at school during the previous year decreased. In 1998, 71 percent of public school teachers felt they were very well prepared to maintain order and discipline in their classrooms (NCES 1999–022).

### OTHER SCHOOL RESOURCES

The ability of the Nation's schools and educators to provide a quality educational experience to students is dependent on human and physical resources. Even if the educational standards of the schools are high, their physical condition may lag behind. Costly improvements are needed in many schools just to meet federal mandates for accessibility and elimination of hazardous conditions such as asbestos or lead paint (GAO 1995). The boom in student enrollment (see *Indicator 3*) may exacerbate personnel shortages, inadequate classroom space, and wear and tear on school buildings. In 1994–96, the average age of U.S. public schools was 42 years old. Twenty-nine percent of public schools were built before 1970 and have never been renovated or were last renovated before 1980. Sixty-one percent were built between 1970 and 1984 or built before 1970 and had been renovated since 1980. Ten percent of public schools in the United States were built after 1984, renovated or not (*Indicator 49* and NCES 1999–048).

### CONCLUSION

In the past two decades, progress has been made in several areas in improving the quality of elementary and secondary education provided the Nation's schools. The data discussed above show some of these improvements, which include more rigorous coursetaking by high school students, increased access to technology in public schools, decreases in student/teacher ratios, and increased discipline in school environments. Nonetheless, this progress has been tempered by such factors as of lower lesson quality when compared with that of other countries, low teacher salaries, and aging school buildings. These factors may contribute to lower confidence among parents and the general public in the quality of public elementary and secondary education.

# Coursetaking and Standards

## Coursetaking in Mathematics and Science

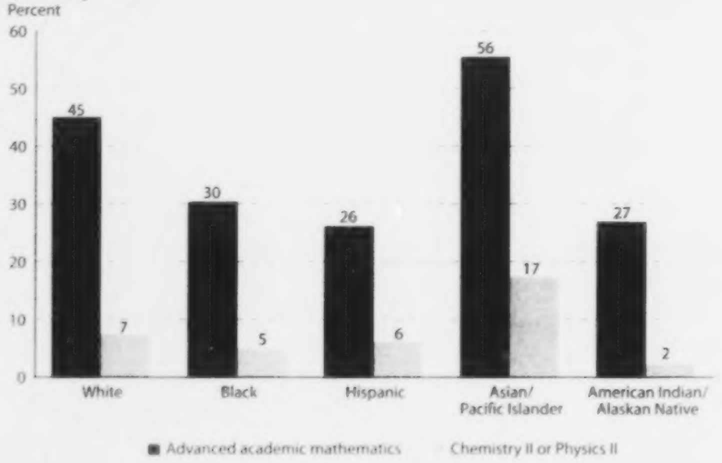
*Asian/Pacific Islander and white high school graduates, private school graduates, and those who completed the New Basics curriculum were usually more likely to complete advanced levels of mathematics and science coursework than their peers. Males and females completed advanced mathematics and science courses at similar rates.*

The highest level of mathematics and science coursework that students complete by high school graduation is one measure of their efforts to perform and achieve at high levels and reflects the content, not just the quantity, of mathematics and science education. In 1998, there were differences in the highest levels of mathematics and science coursework completed among student groups.

Race-ethnicity and control of school were associated with the level of coursework completed by high school graduates in mathematics and science in 1998. Asian/Pacific Islander and white high school graduates were usually more likely to complete Advanced academic level mathematics, which includes such courses as trigonometry and calculus, and the highest level of science courses (Chemistry II or Physics II) than were graduates from other racial-ethnic groups. Similarly, graduates from private schools usually completed higher levels of mathematics and some science courses than did public school graduates. In contrast, there was parity between males and females in mathematics and science coursetaking at various levels, with the exception that females were more likely to take science at the Chemistry I or Physics I level than were males.

In 1998, high school graduates who completed the core New Basics curriculum were more likely to complete the highest levels of mathematics and science courses (Advanced academic levels I, II, and III for mathematics and Chemistry I and Physics I and Chemistry II or Physics II for science) than were graduates who did not meet those requirements.

**DIFFERENCES IN COURSETAKING: Percentage of high school graduates who took advanced mathematics or science courses, by race-ethnicity: 1998**



NOTE: The placement of graduates in the various levels of mathematics and science courses is determined by the completion of at least one course at that level. Graduates who have completed coursework at more than one level were placed into the higher level of coursework completed. Graduates may achieve higher levels of coursework without having taken courses at lower levels.

SOURCE: U.S. Department of Education, NCES, 1998 National Assessment of Educational Progress (NAEP) High School Transcript Study.

FOR MORE INFORMATION:
Supplemental Notes 1, 8

**MATHEMATICS COURSETAKING: Percentage distribution of high school graduates according to the highest levels of mathematics courses taken, by student and school characteristics: 1998**

| Student or school characteristic | No mathematics[1] | Non-academic | Low academic | Middle academic | | | Advanced academic | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Total | Level I | Level II | Total | Level I | Level II | Level III |
| **Total** | **0.9** | **3.7** | **5.6** | **48.5** | **20.8** | **27.7** | **41.4** | **14.4** | **15.2** | **11.8** |
| Sex | | | | | | | | | | |
| Male | 1.1 | 4.2 | 6.4 | 48.1 | 21.7 | 26.4 | 40.1 | 13.2 | 15.0 | 11.9 |
| Female | 0.7 | 3.2 | 4.9 | 48.6 | 19.7 | 28.9 | 42.6 | 15.7 | 15.3 | 11.6 |
| Race-ethnicity | | | | | | | | | | |
| White | 0.9 | 3.2 | 4.9 | 45.8 | 18.5 | 27.4 | 45.1 | 15.7 | 16.5 | 13.0 |
| Black | 0.9 | 3.6 | 8.4 | 56.7 | 25.9 | 30.8 | 30.4 | 14.1 | 9.3 | 7.0 |
| Hispanic | 1.0 | 6.4 | 7.7 | 58.8 | 30.6 | 28.2 | 26.2 | 8.4 | 10.7 | 7.1 |
| Asian/Pacific Islander | 0.2 | 2.8 | 2.8 | 38.6 | 15.8 | 22.8 | 55.5 | 10.3 | 25.3 | 19.9 |
| American Indian/ Alaskan Native | 0.7 | 9.5 | 6.3 | 56.6 | 26.7 | 29.9 | 26.9 | 9.3 | 10.8 | 6.7 |
| Met core New Basics[2] | | | | | | | | | | |
| Yes | 0.4 | 0.7 | 2.7 | 38.9 | 10.1 | 28.8 | 57.4 | 18.7 | 20.5 | 18.1 |
| No | 1.5 | 7.3 | 9.2 | 60.4 | 34.0 | 26.4 | 21.6 | 9.0 | 8.6 | 4.0 |
| Control of school | | | | | | | | | | |
| Public | 1.0 | 4.0 | 6.1 | 50.4 | 21.8 | 28.6 | 38.7 | 14.2 | 13.4 | 11.0 |
| Private | 0 | 0.5 | 0.5 | 28.8 | 9.8 | 18.9 | 70.3 | 16.5 | 33.5 | 20.3 |

[1] Students in this category may have taken some mathematics courses, but these courses are not defined as mathematics courses according to the classification used in this analysis. See *Supplemental Note 8* for more information.

[2] To meet the requirements of the New Basics curriculum, students must complete at least four credits in English and three each in science, mathematics, and social studies.

NOTE: The placement of graduates in the various levels of mathematics courses is determined by the completion of at least one course at that level. Graduates who have completed coursework at more than one level (e.g., Mathematics Middle academic level II and Advanced academic level I) were placed into the higher level of coursework completed (i.e., Advanced academic level I). Graduates may achieve higher levels of coursework (e.g., Mathematics Advanced academic level III) without having taken courses at lower levels (e.g., Mathematics Middle academic level I). Percentages may not add to 100.0 due to rounding.

SOURCE: U.S. Department of Education, NCES. 1998 National Assessment of Educational Progress (NAEP) High School Transcript Study.

**SCIENCE COURSETAKING: Percentage distribution of high school graduates according to the highest levels of science courses taken, by student and school characteristics: 1998**

| Student or school characteristic | No science[1] | Primary physical science | Secondary physical science | Biology | Chemistry I or Physics I | Chemistry I and Physics I | Chemistry II or Physics II |
|---|---|---|---|---|---|---|---|
| **Total** | **0.6** | **3.1** | **6.3** | **30.5** | **33.8** | **18.5** | **7.3** |
| Sex | | | | | | | |
| Male | 0.7 | 3.8 | 7.2 | 31.5 | 29.5 | 19.7 | 7.6 |
| Female | 0.5 | 2.4 | 5.4 | 29.6 | 37.7 | 17.7 | 6.8 |
| Race-ethnicity | | | | | | | |
| White | 0.6 | 2.8 | 5.6 | 29.1 | 34.2 | 20.4 | 7.4 |
| Black | 0.8 | 1.7 | 7.9 | 35.7 | 35.7 | 13.3 | 5.0 |
| Hispanic | 0.9 | 6.6 | 9.4 | 35.5 | 29.0 | 12.8 | 6.0 |
| Asian/Pacific Islander | 0.2 | 2.2 | 4.9 | 22.7 | 34.9 | 17.7 | 17.4 |
| American Indian/ Alaskan Native | 0 | 3.8 | 8.7 | 39.8 | 33.3 | 12.1 | 2.3 |
| Met core New Basics[2] | | | | | | | |
| Yes | 0.2 | 0.5 | 1.9 | 17.3 | 41.5 | 28.0 | 10.7 |
| No | 1.2 | 6.3 | 11.7 | 46.9 | 24.3 | 6.7 | 3.1 |
| Control of school | | | | | | | |
| Public | 0.7 | 3.3 | 6.7 | 31.6 | 34.0 | 16.7 | 7.1 |
| Private | 0 | 0.3 | 1.7 | 19.0 | 32.2 | 37.6 | 9.2 |

[1] Students in this category may have taken some science courses, but these courses are not defined as science courses according to the classification used in this analysis. See *Supplemental Note 8* for more information.

[2] To meet the requirements of the New Basics curriculum, students must complete at least four credits in English and three each in science, mathematics, and social studies.

NOTE: The placement of graduates in the various levels of science courses is determined by the completion of at least one course at that level. Graduates who have completed coursework at more than one level (e.g., Primary Physical Science and Secondary Physical Science) were placed into the higher level of coursework completed (i.e., Secondary Physical Science). Graduates may achieve higher levels of coursework (e.g., Chemistry II or Physics II) without having taken courses at lower levels (e.g., Primary Physical Science). Percentages may not add to 100.0 due to rounding.

SOURCE: U.S. Department of Education, NCES. 1998 National Assessment of Educational Progress (NAEP) High School Transcript Study.

FOR MORE INFORMATION
Supplemental Notes 1, 8

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# Coursetaking and Standards

## Coursetaking in Advanced Mathematics and Science

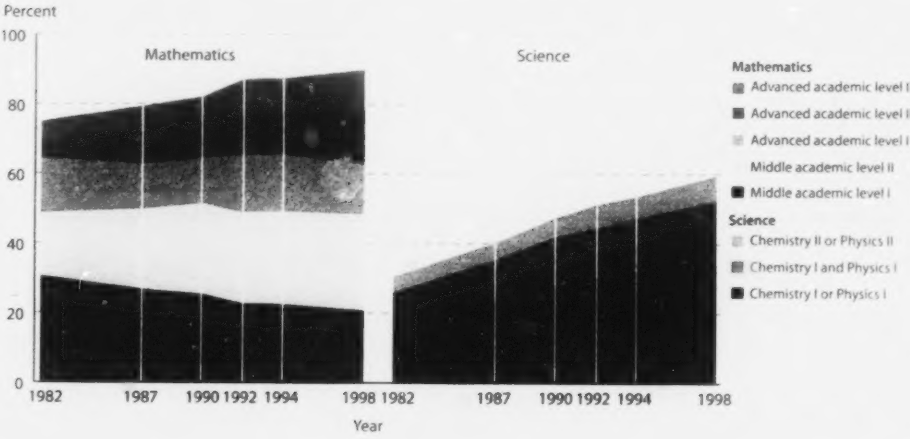
*The percentages of high school graduates who completed courses in advanced mathematics and science increased since the introduction of the New Basics curriculum in 1983.*

The New Basics curriculum (*National Commission on Excellence in Education: A Nation at Risk* 1983) requires that high school graduates complete a minimum of three credits each in both mathematics and science but does not specify which classes to take; therefore, a student can complete the requirements without taking advanced courses (*Indicator 39*). Another way of looking at coursetaking is to examine the nature and intensity of the highest level mathematics and science courses that students complete by the time they graduate from high school.

In 1982, 5 and 6 percent of high school graduates completed mathematics courses at the Advanced academic levels II and III (the most advanced levels of coursetaking that include such mathematics courses as trigonometry, precalculus, and calculus), respectively. In 1998, 15 and 12 percent of high school graduates completed mathematics courses at these two levels, respectively. Similarly, the percentage of high school graduates who only completed courses at Middle academic level II, which includes such courses as Algebra II, increased from 18 to 28 percent. The percentage of students whose most advanced courses were taken at Middle academic level I, which includes such classes as Algebra I and plane geometry, dropped from 31 to 20 percent (see supplemental table 40-1).

The percentages of high school graduates who completed advanced courses in science were also higher in 1998 than in 1982. For example, 5 percent of high school graduates completed courses in Chemistry II or Physics II in 1982, whereas 7 percent did so in 1998. Similarly, the percentages of graduates who completed science courses at the Chemistry I or Physics I level and the Chemistry I and Physics I level were also higher in 1998 than in 1982 (34 and 18 percent versus 19 and 7 percent, respectively) (see supplemental table 40-1).

**ADVANCED COURSETAKING: Percentage distributions of high school graduates according to the highest levels of advanced mathematics and science courses taken: Selected years: 1982–98**



SOURCE: U.S. Department of Education, NCES. High School and Beyond Longitudinal Study of 1980 Sophomores, "Second Follow-up" (HS&B 1980/1984); National Education Longitudinal Study of 1988 Eighth Graders, "High School Transcript Study" (NELS: 1992); and 1987, 1990, 1992, 1994, and 1998 National Assessment of Educational Progress (NAEP) High School Transcript Studies.

FOR MORE INFORMATION:

Supplemental Note 8

Supplemental Table 40-1

*National Commission on Excellence in Education: A Nation at Risk* 1983

# Learning Opportunities

## Class Size of Kindergartens

*Kindergarten classrooms in private schools were more likely to have small class sizes in 1998 than were such classrooms in public schools.*

A major goal of educational reform is to reduce class sizes in kindergarten through 3rd grade. As an illustration, the National Education Association has suggested that 15 should be the maximum number of children in classrooms at these grade levels (NEA 2000). Such class sizes, especially in the early grades, are thought to enhance chances for student learning.

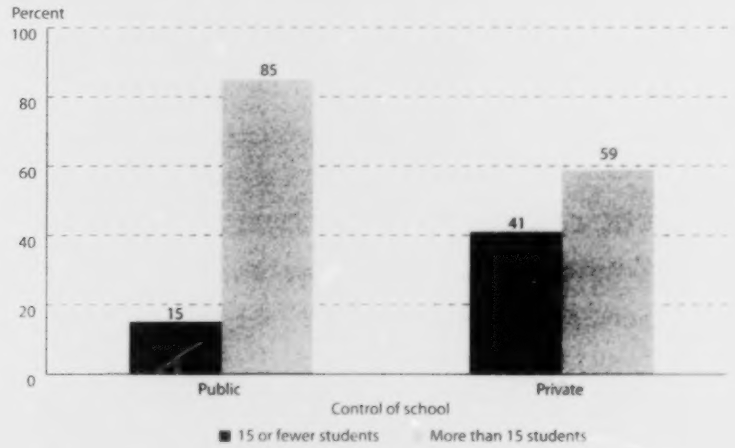
The average kindergarten class in public schools had 20 students in 1998. Approximately 15 percent of these kindergarten classrooms had 15 or fewer children enrolled; 85 percent had more than 15 children enrolled. The average kindergarten class in private schools had 18 children. Forty-one percent of these classes had 15 or fewer students and the remainder had more than 15 students (see supplemental table 41-1).

Class size also varied by the percentage of minority children in the classroom. Kindergarten classrooms with less than 10 percent minority children were more likely to have 15 or fewer children than classrooms where 75 percent or more of the children were minorities.

NOTE: Percentages may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

**CLASS SIZE: Percentage distribution of kindergarten classrooms, by control of school and class size: Fall 1998**



FOR MORE INFORMATION
Supplemental Table 41-1
NEA 2000

# Learning Opportunities

## Interest Areas and Centers in Kindergarten Classrooms

*Public school kindergarten classrooms are more likely to have writing and mathematics areas than private schools.*

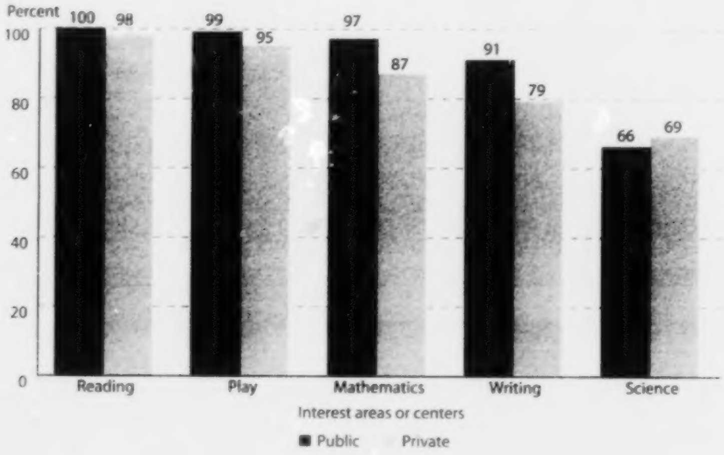
Young children, in large part, construct knowledge through doing. Consequently, it is important to present them with a variety of opportunities for active learning in classrooms (Bredekamp and Copple 1997). Kindergarten classrooms can be structured with specific areas for children to spend time in certain activities. These can include areas for writing, mathematics, science, computers, and play (e.g., solving puzzles and working with blocks).

Nearly all kindergarten classrooms have reading, mathematics, and play areas. Almost 90 percent of kindergarten classrooms have a writing area, and about 67 percent have a science area.

Public school kindergarten classrooms are more likely to have writing and mathematics areas than are private schools.

Classrooms with 75 percent or more minority children are generally less likely than classrooms with fewer minority children to have a science area (see supplemental table 42-1).

**KINDERGARTEN CLASSROOMS: Percentage of kindergarten classrooms with interest areas or centers, by control of school: Fall 1998**



SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

FOR MORE INFORMATION
Supplemental Table 42-1
Bredekamp and Copple 1997

116

# *Learning Opportunities*

## Student/Teacher Ratios

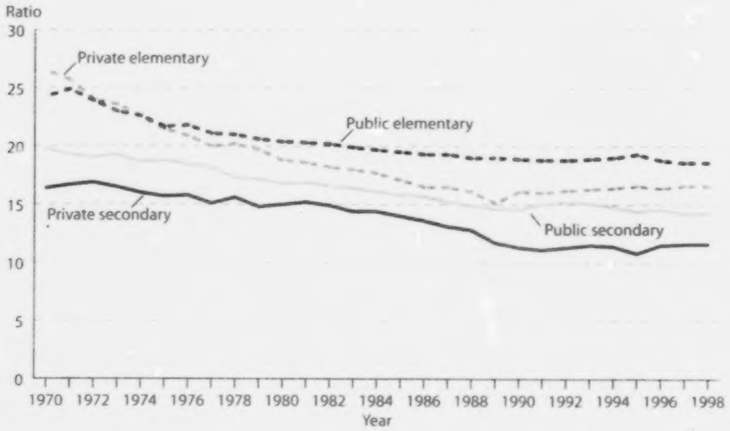
*Student/teacher ratios have decreased in public and private schools since 1970.*

One of the goals of national education reform is to decrease class sizes across the Nation. Class size is a measure of the average number of students with whom a teacher has contact during an average class period or school day. Student/teacher ratios, a proxy measure for class size, compare the total student enrollment at a school with the total number of full-time equivalent teachers, including teachers who do not teach regular classes, such as music and physical education. Although student/teacher ratios are not a measure of class size, they provide an alternative means of assessing the potential for contact between students and teachers.

Student/teacher ratios were smaller in 1998 than in 1970. In 1970, there were 24 and 20 elementary and secondary students per teacher, respectively, in public schools. In 1998, there were 19 and 14 elementary and secondary students per public school teacher, respectively. Decreases in student/teacher ratios also occurred at private schools, with most of them taking place during the 1970s and 1980s (see supplemental table 43-1). In most years, student/teacher ratios were usually smaller at private schools than public schools and at the secondary level than the elementary level.

While much emphasis has been placed on reducing class size at the elementary level (see *Indicator 41)*, the incidence of larger student/teacher ratios at the elementary level than at the secondary level may be partly attributable to structural differences between elementary and secondary education. The majority of elementary classrooms are self-contained, with most subjects taught by a single teacher. In contrast, most secondary classrooms are departmentalized, with different subjects taught by different teachers (NCES 97–460). Also, secondary schools usually offer more courses and teach more subjects than elementary schools. Because of this departmentalization and subject matter specialization, more teachers may be needed at the secondary level than at the elementary level to teach the same number of students.

**STUDENTS AND TEACHERS: Student/teacher ratios: 1970–98**



NOTE: Data for teachers are expressed in full-time equivalent (FTE) units. Distribution of unclassified teachers by level is estimated. Distribution of elementary and secondary school teachers by level is determined by reporting units. Included in the totals and the elementary category are a small number of nursery school teachers and students. Public school ratios for 1998 and private school ratios for 1971–75, 1979–80, 1981–82, 1984–85, and 1986–96 are estimated. Private school ratios for 1997 and 1998 are projected.

SOURCE: U.S. Department of Education, NCES. Statistics of Public Elementary and Secondary Day Schools; Common Core of Data surveys; Private School Surveys; *Projections of Education Statistics to 2009* (NCES 1999–038), 1999; and *Digest of Education Statistics 1999* (NCES 2000–031), 2000.

FOR MORE INFORMATION
Supplemental Table 43-1
NCES 97–460

# Learning Opportunities

## Instructional Environments in 8th-Grade Mathematics

*The quality of content of 8th-grade mathematics lessons in the United States was rated lower than the quality of those in Germany and Japan.*

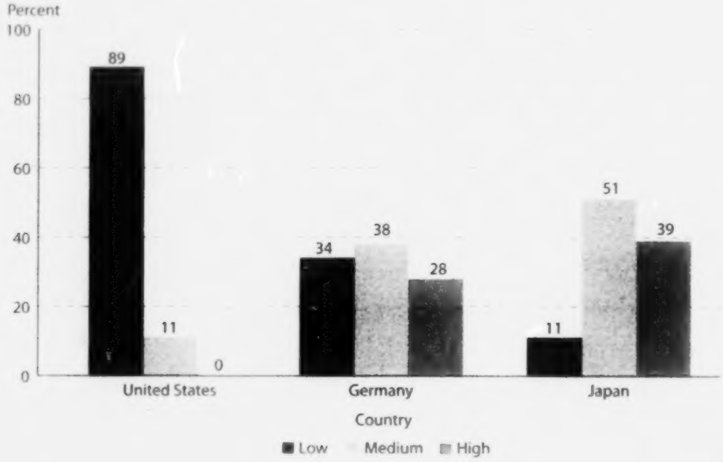
The Third International Mathematics and Science Study (TIMSS) included a Videotape Classroom Study of 231 classrooms of 8th-grade mathematics in Germany, Japan, and the United States. The study examined teachers' goals, the organization and process of mathematics instruction, and the mathematical content of the lessons presented.

A rating of the quality of the mathematical content of a subset of lessons found the United States lagging behind Germany and Japan in the quality of content in its 8th-grade mathematics lessons. Thirty-nine percent of the Japanese mathematics lessons and 28 percent of the German lessons received the highest quality rating whereas none of the U.S. lessons received this rating. In addition, U.S. lessons were more likely to receive the lowest rating (89 percent) than lessons in Germany (34 percent) or Japan (11 percent).

Eighth-grade mathematics lessons in the United States differed from those in Germany and Japan in instructional processes as well. For example, 83 percent of U.S. lessons contained only "task-controlled" tasks in which the teacher demonstrated a particular solution method to students and asked them to replicate that solution, as opposed to "solver-controlled" tasks in which the teacher encouraged students to find alternative solution approaches on their own. Forty-eight percent of German lessons and 17 percent of Japanese lessons contained only "task-controlled" tasks (see supplemental table 44-1).

After their lesson had been videotaped, teachers were asked, "What was the main thing you wanted students to learn from today's lesson?" Responses to this portion of the study showed that, while German and U.S. teachers emphasized mathematical skills as a goal more often than Japanese teachers, Japanese teachers emphasized mathematical thinking more often than did their German and American counterparts (see supplemental table 44-2).

**CONTENT QUALITY: Percentage distribution of 8th-grade lessons rated as having low-, medium-, and high-quality mathematical content: 1994–95**



NOTE: Percentages may not add to100 due to rounding.

SOURCE: U.S. Department of Education, NCES. *The TIMSS Videotape Classroom Study: Methods and Findings from an Exploratory Research Project on Eighth-Grade Mathematics Instruction in Germany, Japan, and the United States* (NCES 1999-074), 1999.

FOR MORE INFORMATION:
Supplemental Note 7
Supplemental Tables 44-1, 44-2

## Learning Opportunities

## Students' Use of the Internet

*Students in grades 1–12 access the Internet primarily at school. Differences exist among racial-ethnic groups and family income levels in Internet use at school and access to a computer at home.*

In 1998, 78 percent of students in grades 1–12 used the Internet at school. White students in grades 1–12 were more likely than black or Hispanic students to use the Internet at school (83 versus 70 and 71 percent, respectively). In addition, students from high-income families were more likely than students from low- and middle-income families to use the Internet at school (86 versus 68 and 78 percent, respectively) (see supplemental table 45-1).

Fifty-eight percent of students in grades 1–12 had a computer in their household in 1998, but such access varied substantially across racial-ethnic groups. For example, in 1998, 70 percent of white students had a computer in their household, compared with 28 percent of black or Hispanic students (see supplemental table 45-1).

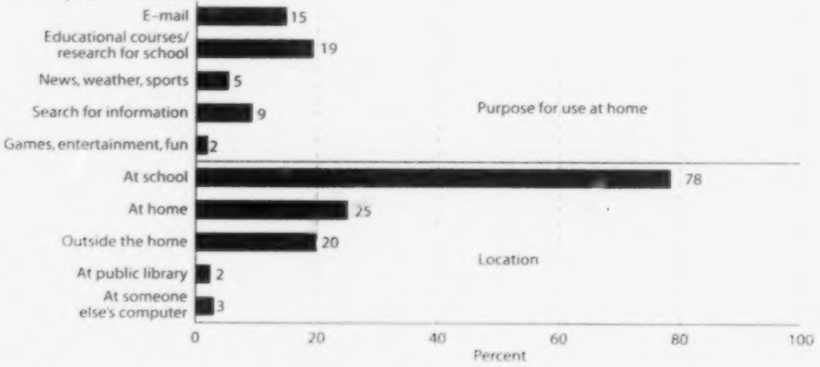
Access to a computer also varied substantially with family income: 88 percent of students from high-income families had a computer in the household, compared with 54 percent of students from middle-income families and 21 percent of students from low-income families (see supplemental table 45-1).

The highest percentage of students in grades 1–12 used the Internet on a regular basis to take educational courses or do research for school (19 percent). Furthermore, of the purposes for using the Internet on a regular basis, students named e-mail, educational courses or doing research for school, and searching the Internet for information as the three most important (see supplemental table 45-2).

NOTE: Analysis includes only those students in grades 1–12 who were ages 5–18.

SOURCE: U.S. Department of Commerce, Bureau of the Census, December and October Current Population Surveys, 1998.

**INTERNET USE: Percentage of students in grades 1–12 who used the Internet for various purposes at various locations: 1998**



FOR MORE INFORMATION:
Supplemental Notes 1, 4
Supplemental Tables 45-1, 45-2

# School Choice

## School Choice and Parental Satisfaction

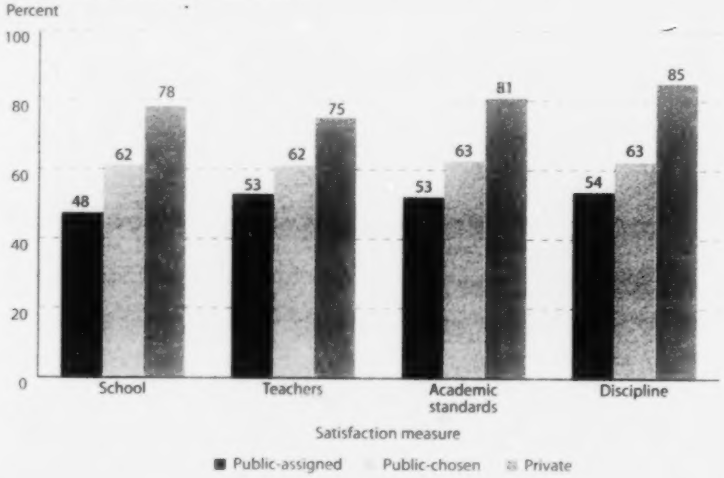
*A higher percentage of students in grades 3–12 were enrolled in schools selected by their parents in 1999 than in 1993. These parents were more likely to be very satisfied with their children's schools than parents of children attending assigned schools.*

Between 1993 and 1999, the percentage of students in grades 3–12 attending an assigned public school dropped from 80 to 76 percent. Overall, more students were in a public school selected by their parents than in a private school in 1999. Black students were more likely to be in a chosen school than white and Hispanic students. Of the black and Hispanic children whose parents selected their schools, more attended a public rather than a private school (see supplemental table 46-1).

In 1999, the percentages of students in grades 3–12 whose parents reported being very satisfied with their child's school, teachers, school's discipline, and academic standards were highest among those in private schools, followed by those in chosen public schools, and finally by those in assigned public schools. At private schools, a greater percentage of children had parents who were very satisfied with discipline than with the school or teachers in 1999. Although more than half of the students in assigned public schools in grades 3–12 had parents who were very satisfied with most aspects of their children's school in both 1993 and 1999, there was a decrease between these two years in the percentage of children with very satisfied parents in the categories of the school, teachers, and academic standards (see supplemental table 46-2).

For children in assigned or chosen public schools in 1999, parents were more likely to be very satisfied with the various aspects of schools when their children were in grades 3–5 than in grades 9–12. This was not the case for parents of private school children, however: these parents were as likely to be very satisfied with the school, academic standards, and discipline (but not teachers) whether their children were in grades 3–5 or 9–12.

**SCHOOL SATISFACTION: Percentage of students in grades 3–12 whose parents reported being very satisfied with aspects of their child's school, by type of choice: 1999**



NOTE: Includes those who responded "very satisfied" from a scale of "very satisfied," "somewhat satisfied," "somewhat dissatisfied," and "very dissatisfied." Ungraded students and homeschoolers were excluded from the estimates.

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Parent Interview Component).

FOR MORE INFORMATION:
Supplemental Notes 2, 1
Supplemental Tables 46-1, 46-2

## Teachers

# Preparation and Qualifications of Public School Teachers

*In 1998, 38 percent of public school teachers held subject-matter specific degrees, whereas 62 percent held degrees in various education-related fields.*

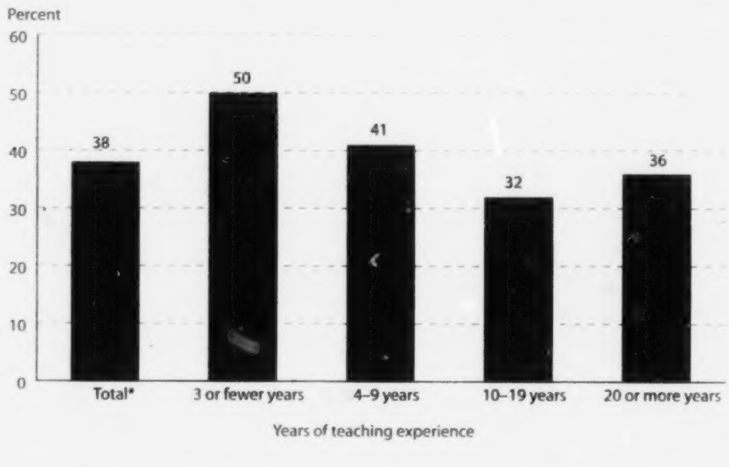
Teacher quality may be one of the most important determinants of school quality. Evaluating teachers' preservice learning and certification is one way to measure their potential effectiveness.

In 1998, almost all public school teachers had a bachelor's degree and 45 percent held a master's degree. The percentage of teachers with master's degrees increased with years of teaching experience. Teachers at schools with high minority enrollment (50 percent or more) or a high percentage of students eligible for free or reduced-price lunch (60 percent or more) were less likely to have master's degrees than their counterparts at schools with a low minority enrollment (5 percent or less) or a low percentage of students eligible for free or reduced-price lunch (less than 15 percent). Teachers at elementary and middle schools were less likely to have a master's degree than teachers at high schools (see supplemental table 47-1).

Prospective teachers have been encouraged to earn degrees in academic subjects (e.g., mathematics) rather than in education (Ravitch 1998). In 1998, 38 percent of full-time public school teachers held academic degrees. Teachers with three or fewer years of teaching experience were more likely than more experienced teachers, and high school teachers were more likely than elementary or middle school teachers to hold academic degrees.

Teachers' qualifications also can be assessed by examining their state certifications. Most public school teachers in 1998 had regular or standard state certificates or advanced professional certificates (93 and 92 percent of general elementary and departmentalized teachers, respectively) (see supplemental table 47-3). The percentage of teachers with regular or standard state certification or advanced professional certification generally increased with years of teaching experience. Conversely, teachers with three or fewer years of teaching experience were more likely to hold temporary or emergency certificates or waivers than teachers with 20 or more years of experience.

**TEACHERS' EDUCATION: Percentage of full-time public school teachers with undergraduate or graduate majors in an academic field, by years of teaching experience: 1998**



* Includes full-time public school teachers who taught grades 1–12 whose main teaching assignment was in English/language arts, social studies/social sciences, foreign language, mathematics, or science, or who taught in a self-contained classroom.

SOURCE: U.S. Department of Education, NCES. *Teacher Quality: A Report on the Preparation and Qualifications of Public School Teachers* (NCES 1999-080), 1999.

FOR MORE INFORMATION
Supplemental Tables 47-1, 47-2, 47-3
Ravitch 1998

# Teachers

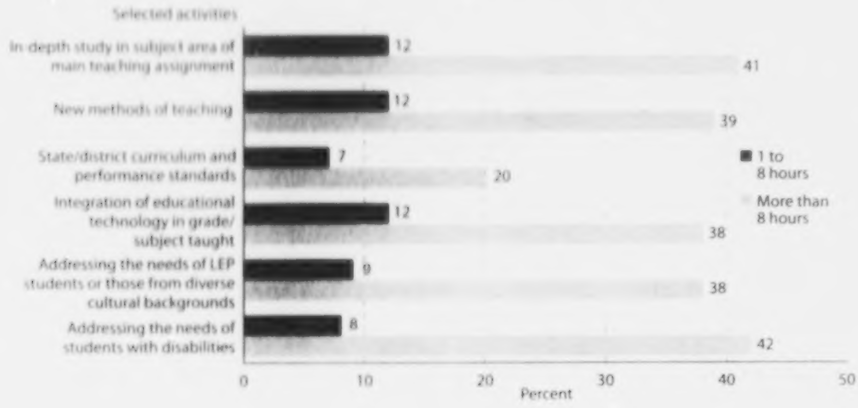
## Perceived Impact of Professional Development

*Teachers who spend more time in professional development activities are more likely to report improvements in classroom teaching than those who spend less.*

The rationale for professional development is to build educators' capacity for effective teaching. In 1998, the percentage of full-time public school teachers who participated in development activities in the past 12 months ranged from 81 percent (implementing state or district curriculum and performance standards) to 31 percent (addressing the needs of students with limited English proficiency or from diverse cultural backgrounds). When teachers did participate in professional development, they were usually more likely to participate for one to eight hours than for longer periods of time (see supplemental table 48-1).

Teachers varied in the extent to which they believed participation in professional development helped them upgrade their knowledge and skills. In 1998, 12 percent of teachers who participated in an in-depth study in the subject area of their main teaching assignment for one to eight hours believed that the activity improved their classroom teaching a lot, whereas 41 percent of teachers who spent more than 8 hours participating in this activity shared the same perception. This correspondence between time spent participating in a professional development activity and the belief that such participation improved classroom teaching a lot was evident for other professional development activities as well. Years of teaching experience generally were not associated with feeling that participation in professional development improved classroom teaching a lot.

**PARTICIPATION IN PROFESSIONAL DEVELOPMENT: Percentage of full-time public school teachers who participated in professional development in the past 12 months who believed the activity improved their classroom teaching "a lot": 1998**



SOURCE: U.S. Department of Education, NCES. *Teacher Quality: A Report on the Preparation and Qualifications of Public School Teachers* (NCES 1999-080), 1999.

FOR MORE INFORMATION
Supplemental Table 48-1

# Other School Resources

## Age of School Buildings

*The average public school was built 42 years ago during the baby boom. About one-third of all public schools are in the oldest condition: built before 1970 and not renovated since 1980.*

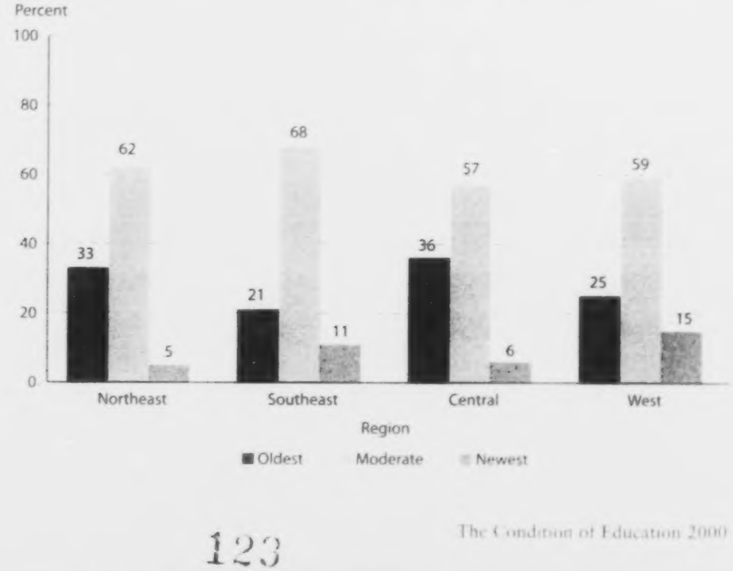
Public elementary and secondary enrollment is expected to increase another million between 1999 and 2006, reaching an all-time high of 44.4 million and increasing demand on schools (*Indicator 3*). Some fear that schools with poor or overcrowded conditions are being associated with decreases in both teacher and student performance. Older schools are also less likely to be connected to the Internet than recently built or renovated schools (NCES 98-031). Nationwide, the average age of public schools is 42 years old, and 73 percent are 30 years old or older (see supplemental table 49-1).

A school's physical condition depends on more than when it was built: it is also useful to consider when the school was last renovated. In an effort to assess the condition of America's schools, survey results from three nationwide samples from 1994, 1995, and 1996 were combined. The date of the last renovation and the school's age were two factors used to define a school's physical condition.

Across the Nation, 29 percent of all public schools are in the "oldest" condition, built before 1970 and not renovated since 1980. Sixty-one percent are "moderate" schools, built between 1970 and 1984 or before 1970 and last renovated in 1980 or later. Ten percent are "newest" schools, which were built after 1984, renovated or not (see supplemental table 49-1).

A larger percentage of public schools in the Central region than in the Southeast are in the oldest category (36 versus 21 percent). In the rest of the country, 25 percent of public schools in the West and 33 percent in the Northeast are among the oldest. A smaller percentage of schools in the Central and Northeast regions than in the West are in the newest category (6 and 5 percent, respectively, versus 15 percent). Eleven percent of public schools in the Southeast are considered newest.

**CONDITION OF SCHOOLS: Percentage distribution of public schools according to school condition, by region: 1994–96**



NOTE: Estimates are aggregates of data collected in 1994, 1995, and 1996. Percentages may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, NCES. *How Old Are America's Public Schools?* (NCES 1999–048), 1999.

FOR MORE INFORMATION:
Supplemental Note 4
Supplemental Tables 49-1, 49-2
NCES 98-031

# Section 5

# *The Context of Postsecondary Education*

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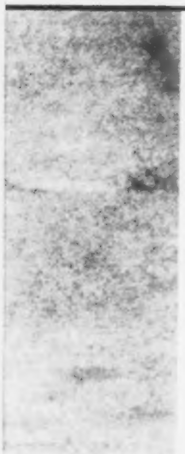

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# Summary: The Context of Postsecondary Education

Postsecondary education takes place in a variety of types of public and private institutions, including less-than-2-year institutions that provide short-term vocational training, 2-year institutions that offer associate's degrees and vocational certificates, and 4-year colleges and universities that offer bachelor's degrees or higher. Postsecondary education serves adults of all ages, and these individuals enroll with a wide range of educational objectives. Issues such as access and attainment (addressed in Section 3) have been prominent, but various aspects of the context in which postsecondary education is delivered have been the focus of concern as well. Some of these include the content of the curriculum, student access to courses and faculty, and the availability of student support services. The national data available on these topics and, in particular, change over time, are limited. Nevertheless, the data that are available provide some important insights into the contexts in which postsecondary education takes place.

## COURSETAKING AND STANDARDS

Many students arrive at postsecondary institutions without adequate preparation in reading, writing, or mathematics to succeed in college-level work. To address the needs of these students, all public 2-year institutions, 81 percent of public 4-year institutions, and 63 percent of private 4-year institutions offered remedial courses in reading, writing, or mathematics in 1995 (*Indicator 50*).

The debate about whether postsecondary institutions should offer this instruction is ongoing. Some maintain that remedial courses expand opportunities for students with academic deficiencies. Others believe that precollege-level courses do not belong in the college curriculum and compromise the quality of postsecondary education because they divert resources from college-level activities. The debate also concerns which types of postsecondary institutions are the most appropriate locations for remedial work (Breneman 1998).

## LEARNING OPPORTUNITIES

Students' learning opportunities are influenced by the range of courses from which they can choose, the size of their classes, and the teaching skills of the faculty.

Students' perceptions provide a useful perspective on the quality of learning opportunities at their institutions (although the views of others would also be needed for a complete assessment). Large majorities of students enrolling in postsecondary education for the first time in 1995–96 reported being satisfied with course availability, class size, and their instructors' ability to teach (*Indicator 51*). At the 4-year level, beginning students at private, not-for-profit institutions were more likely than those at public institutions to be satisfied with course availability (81 versus 73 percent), class size (97 versus 88 percent), and instructors' ability to teach (93 versus 87 percent). Within the public sector, beginning students at 2-year institutions were more likely than those at 4-year institutions to be satisfied with each of these aspects of instruction.

Despite beginning students' high level of satisfaction with learning opportunities, concern exists about the extent to which undergraduates interact directly with full-time senior faculty (Boyer Commission 1998). In fact, however, most full-time senior faculty (professors and associate professors) with instructional responsibilities at 4-year institutions do some undergraduate teaching. In fall 1992, 61 percent of full professors and 64 percent of associate professors at doctoral institutions taught at least one undergraduate course for credit (*Indicator 52*). At nondoctoral institutions, at least 90 percent did so. From the students' perspective, both upper- and lower-division under-

## Summary: The Context of Postsecondary Education

**Continued**

graduates at 4-year colleges and universities spent about 30 percent of their classroom hours with full professors and another 26 percent with associate professors in fall 1987 (*Indicator 50, The Condition of Education 1996*). No significant change occurred in the percentage of hours spent between 1987 and 1992.

Institutions offer distance education courses for a variety of reasons, including increasing students' access to and improving the quality of course offerings (NCES 98–062). A growing number of institutions are offering such courses. In just 2 years (between fall 1995 and the 1997–98 academic year), the proportion of institutions offering distance learning courses grew from 62 to 79 percent among public 4-year institutions, and from 58 to 72 percent among public 2-year institutions (*Indicator 53*). All but nine percent of each type of institution already offered or planned to offer them in the next three years. To date, public institutions have been more active in this area than have private institutions. In 1997–98, 53 percent of private 4-year institutions neither offered nor planned to offer distance learning courses. A total of 1.6 million students were enrolled in distance education courses in 1997–98 (double the number enrolled in fall 1995). As institutions employ new technologies to broaden access to postsecondary education, this strategy refocuses attention on who has access to computers and the Internet.

### SPECIAL PROGRAMS

By law, education institutions must provide access and reasonable accommodations to qualified students with disabilities. In 1996–97 or 1997–98, about three-quarters of all 2- and 4-year postsecondary institutions enrolled students with disabilities, and nearly all institutions with such students (98 percent) provided at least one support service or accommodation (*Indicator 54*). Among the most common services were alternative exam formats or additional time to complete exams (88 percent) and tutors (77 percent).

### FACULTY CHARACTERISTICS

As the student population in the United States has become more diverse, many institutions have attempted to increase the diversity of their faculties as well. There is evidence of success. A study (NCES 98–252) comparing new full-time faculty (those in the first seven years of their academic careers) with senior faculty (those with eight or more years of full-time college experience) found that in fall 1992 new faculty (about one-third of all faculty) were more likely than senior faculty to be female (41 versus 27 percent) and racial-ethnic minorities (17 versus 12 percent).

Adequate salaries are necessary to attract and retain highly qualified faculty. Adjusting for inflation, the salaries of full-time instructional faculty declined from the early 1970s through the early 1980s (*Indicator 55*). Since then, average pay across the ranks as a whole has risen, but the purchasing power of salaries within each rank has not been fully recovered. For example, in constant 1997–98 dollars, the average salary for a full professor was $72,500 in 1972–73, $57,400 in 1980–81, and $68,700 in 1997–98.

### COLLEGE RESOURCES

Decisions that colleges and universities make in areas such as faculty workload, tenure, and instructional time have important implications. Across all types of degree-granting postsecondary education institutions, full-time faculty members with any instructional responsibilities worked an average of 53 hours per week in fall 1992. Of this time, 55 percent was spent performing teaching-related activities, and 18 percent was spent conducting research (*Indicator 56*). The time allocated to teaching and

## Summary: The Context of Postsecondary Education

**Continued**

research varied by institutional type and faculty rank, with junior faculty (assistant professors, instructors, and lecturers) spending proportionately more time than full professors on teaching-related activities.

Part-time faculty provide institutions with a flexible work force that allows them to adjust to enrollment changes, fill temporary vacancies, teach specialized courses, and reduce faculty costs. Some faculty teach part time by choice, but others do not, and may spread their time among a number of different institutions to support themselves (Gappa and Leslie 1993). In fall 1992, 42 percent of all instructional faculty and staff worked part time, and part-timers constituted a majority of instructional faculty and staff at 2-year institutions (60 percent; *Indicator 57*).

# Coursetaking and Standards

## Undergraduate Remedial Education

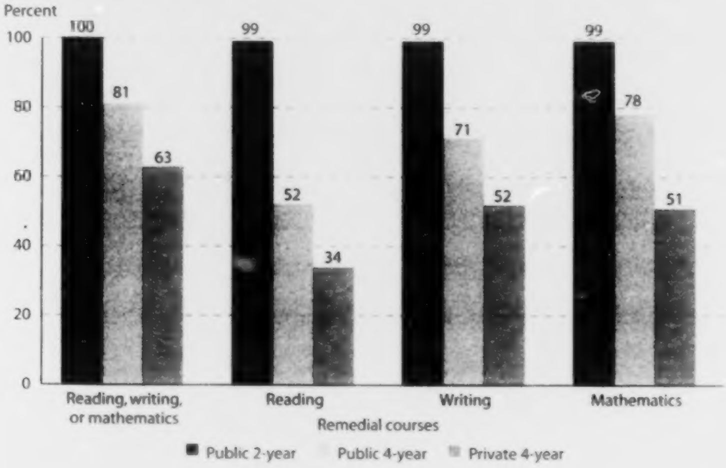
***All public 2-year institutions and most public and private 4-year institutions offer remedial courses in reading, writing, or mathematics.***

Many students enter postsecondary education institutions lacking the reading, writing, or mathematics skills necessary to perform college-level work. Therefore, most institutions enrolling freshmen offer remedial courses to bring these students' skills up to the college level. While some consider remedial courses as one way to expand educational opportunities for students with academic deficiencies, others feel that precollege-level instruction should be eliminated or strictly limited in 4-year institutions.

In 1995, all public 2-year and 81 percent of public 4-year institutions offered remedial reading, writing, or mathematics courses. Fewer private 4-year institutions (63 percent) offered remedial courses in one or more of these subjects.

Public 2-year institutions were more likely than either public or private 4-year institutions to offer remedial courses because of their particular mission and the types of students they serve. About one-half of public 2-year institutions had open admissions in 1995, compared with less than 10 percent of public and private 4-year institutions (NCES 97–584). Moreover, freshmen at public 2-year institutions were almost twice as likely as their peers at public 4-year institutions to enroll in remedial courses in reading, writing, or mathematics (41 versus 22 percent; NCES 97–584).

**REMEDIAL COURSES OFFERED: Percentage of postsecondary education institutions offering remedial courses, by type of courses and type of institution: Fall 1995**



SOURCE: U.S. Department of Education, NCES, Postsecondary Education Quick Information System, "Survey on Remedial Education in Higher Education Institutions," 1995.

FOR MORE INFORMATION
NCES 97–584

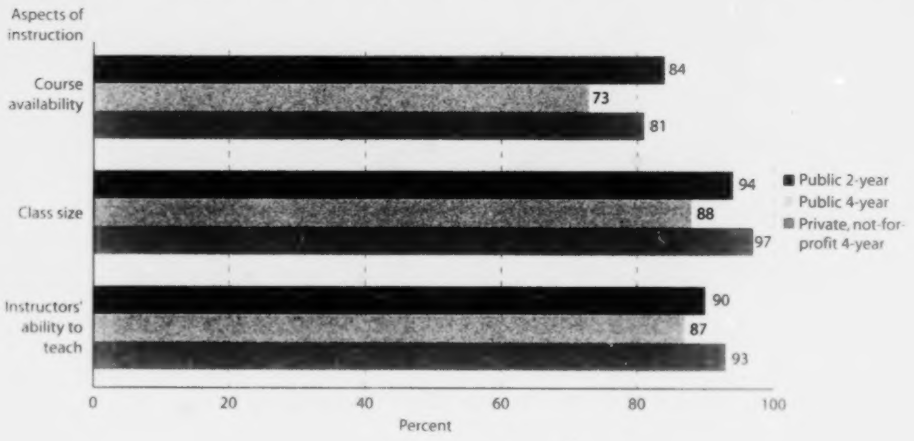
# Learning Opportunities

## Student Satisfaction with Instruction

*Beginning postsecondary students in 1995–96 were very satisfied with course availability, class size, and their instructors' ability to teach.*

Students' learning opportunities are influenced by the range of courses from which they can choose, the size of their classes, and the teaching skills of the faculty. While the assessments of faculty and administrators as well as students would be necessary to provide a complete picture of perceived instructional quality, it is still useful to know what students think and how their satisfaction varies across types of institutions. When asked if satisfied with various aspects of instruction at their institution, a large majority of beginning students at both 2- and 4-year institutions in 1995–96 responded affirmatively. At the 4-year level, however, beginning students at private, not-for-profit institutions were more likely than those at public institutions to be satisfied with course availability (81 versus 73 percent), class size (97 versus 88 percent), and the instructors' ability to teach (93 versus 87 percent). In the public sector, beginning students at 2-year institutions were more likely than those at 4-year institutions to be satisfied with each of these aspects of instruction.

**STUDENT SATISFACTION WITH INSTRUCTION: Percentage of beginning postsecondary students who were satisfied with various aspects of instruction at their institution, by type of institution: 1995–96**



SOURCE: U.S. Department of Education, NCES, National Postsecondary Student Aid Study (NPSAS:1996), Undergraduate Data Analysis System.

FOR MORE INFORMATION
NCES 98-080

## Learning Opportunities

# Instructional Faculty and Staff Who Teach Undergraduates

*Most instructional faculty and staff at 4-year institutions taught undergraduates in fall 1992, but the percentage doing so declined as academic rank increased.*

Although faculty in postsecondary institutions perform a wide range of activities, teaching undergraduates is one of their most important responsibilities. The percentage of instructional faculty and staff, particularly full and associate professors, who teach undergraduate classes provides a measure of the scope of faculty involvement in undergraduate education.

Among full-time instructional faculty and staff who taught classes for credit at 4-year institutions in fall 1992, 79 percent reported teaching at least one class for credit to undergraduates, and 61 percent reported teaching undergraduate classes exclusively.

Most full professors and associate professors at 4-year institutions who taught classes for credit did some undergraduate teaching. For example, at 4-year doctoral institutions, 61 percent of full professors and 64 percent of associate professors taught at least one undergraduate class for credit, as did at least 90 percent of their colleagues at 4-year nondoctoral institutions.

Reflecting the broader missions of their institutions and the greater number of graduate students, full-time instructional faculty and staff at doctoral institutions were less likely than their colleagues at nondoctoral institutions to teach undergraduate classes.

At each type of 4-year institution, the percentage of full-time instructional faculty and staff who taught undergraduate classes and who taught these classes exclusively declined as their academic rank increased.

**UNDERGRADUATE TEACHING: Percentage of full-time instructional faculty and staff in 4-year institutions who taught at least one undergraduate class or who taught only undergraduate classes for credit, by academic rank: Fall 1992**

| | Taught at least one undergraduate class for credit | | | Taught only undergraduate classes for credit | | |
|---|---|---|---|---|---|---|
| Academic rank | All 4-year | 4-year doctoral | 4-year non-doctoral | All 4-year | 4-year doctoral | 4-year non-doctoral |
| **Total*** | **79.0** | **66.0** | **91.9** | **61.3** | **44.2** | **78.2** |
| Full professor | 74.6 | 61.0 | 90.5 | 54.1 | 38.2 | 72.9 |
| Associate professor | 77.6 | 64.4 | 90.3 | 58.0 | 39.7 | 75.6 |
| Assistant professor | 82.2 | 70.7 | 92.9 | 65.1 | 47.3 | 81.5 |
| Instructor or lecturer | 89.3 | 79.7 | 97.1 | 83.4 | 73.8 | 91.3 |

* Included in the total but not shown separately are those with other academic ranks or no academic rank.

NOTE: The data are based on full-time instructional faculty and staff who reported teaching at least one class for credit at 4-year institutions in fall 1992. Instructional faculty and staff at 2-year institutions were excluded because all of them reported teaching undergraduate classes for credit in fall 1992.

SOURCE: U.S. Department of Education, NCES. 1993 National Study of Postsecondary Faculty (NSOPF: 1993).

FOR MORE INFORMATION:
Supplemental Note 5
NCES 2000–081, NCES 2000–186

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## Learning Opportunities

# Distance Learning in Postsecondary Education

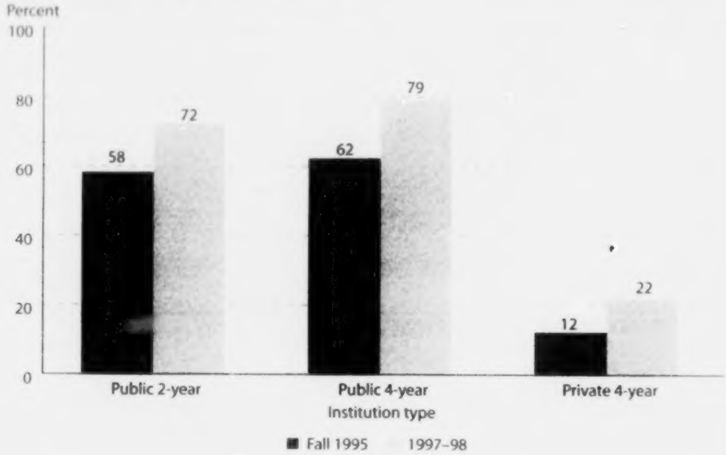
*An increasing number of postsecondary, degree-granting institutions are offering distance education courses.*

Institutions cite various reasons for offering distance education courses delivered through the Internet or other audio/video media (interactive or one-way). Among the goals are increasing students' access, increasing enrollments and the institution's access to new audiences, and improving the quality of course offerings (NCES 98–062). Because distance education can eliminate travel and scheduling constraints, it can increase access to higher education. As the costs of computers and other electronic devices decrease, more students will be able to take advantage of these courses.

Although there is limited evidence on whether these goals are being met, increasing numbers of institutions, particularly in the public sector, have begun offering distance learning. Among public 4-year institutions, the percentage offering such courses grew from 62 percent in fall 1995 to 79 percent in 1997–98, and in public 2-year institutions, rising from 58 to 72 percent. In 1997–98, an additional 12 percent of public 4-year and 19 percent of public 2-year institutions planned to offer them in the next 3 years (NCES 2000–013). Consequently, all but nine percent of both public 2- and 4-year institutions either offered or planned to offer distance education courses in the next three years. Private 4-year institutions were much less likely than public institutions to offer such courses in either year, and in 1997–98, 53 percent neither offered them nor had plans to do so in the next three years.

Total enrollment in distance education courses across all postsecondary degree-granting institutions approximately doubled from 1995 to 1997–98, from 754,000 to 1.6 million (NCES 2000–013). The number of students participating is likely to be smaller because some students might be enrolled in more than one course.

**DISTANCE EDUCATION COURSES: Percentage of postsecondary, degree-granting institutions that offered distance education courses, by institution type: Fall 1995 and 1997–98**



SOURCE: U.S. Department of Education, NCES Postsecondary Education Quick Information System, "Survey on Distance Education Courses Offered by Higher Education Institutions," 1995; and "Survey on Distance Education at Postsecondary Institutions," 1997–98

FOR MORE INFORMATION

Supplemental Note 5

NCES 98–062, NCES 2000–013

# Special Programs

## Services for Disabled Postsecondary Students

*Nearly all institutions that enrolled students with disabilities provided at least one support service or accommodation for these students.*

Congress has passed major legislation—including the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973—guaranteeing Americans with disabilities access to public buildings and services. Under these laws, educational institutions must provide access and reasonable accommodations to qualified students with disabilities.

In 1995–96, about six percent of undergraduates reported that they had a disability (NCES 1999–187). Of those with disabilities, 29 percent had a learning disability, 23 percent an orthopedic impairment, 16 percent a noncorrectable vision impairment, 16 percent a hearing impairment, and 3 percent a speech impairment. In addition, about one-fifth reported that they had an "other health-related" disability. Compared with other students, students with disabilities were less likely to attend public 4-year institutions and more likely to attend for-profit or less-than-4-year institutions (NCES 1999–187).

In 1996–97 or 1997–98, about three-quarters of 2- and 4-year postsecondary education institutions enrolled students with disabilities, and nearly all (98 percent) of these institutions provided at least one support service or accommodation for students with disabilities (NCES 1999–046). Public 4-year institutions were more likely than private 4-year institutions to provide each of the services or accommodations shown below with the exception of tutoring, where the apparent difference was not significant.

Although students with disabilities were more likely to attend public 2-year institutions than public 4-year institutions, public 4-year institutions were more likely than public 2-year institutions to provide alternative examination formats or more time to complete exams and to provide readers, notetakers, or scribes and textbooks on tape.

**SERVICES FOR DISABLED STUDENTS: Percentage of 2-year and 4-year postsecondary education institutions that enrolled students with disabilities that offered selected services or accommodations to students with disabilities, by type of service or accommodation: 1996–97 or 1997–98**

| Selected service or accommodation | Total | Public | | Private | |
|---|---|---|---|---|---|
| | | 2-year | 4-year | 2-year | 4-year |
| Alternative exam formats or more time | 88 | 94 | 100 | 55 | 90 |
| Tutors to assist with ongoing coursework | 77 | 87 | 82 | 51 | 75 |
| Readers, notetakers, scribes | 69 | 82 | 93 | 18 | 66 |
| Registration assistance or priority registration | 62 | 77 | 83 | 26 | 53 |
| Adaptive equipment/technology | 58 | 81 | 80 | 30 | 39 |
| Textbooks on tape | 55 | 66 | 85 | 11 | 49 |

NOTE: Institutions were asked whether they provided each service in 1996–97 or 1997–98.

SOURCE: U.S. Department of Education, NCES. Postsecondary Education Quick Information System, "Survey on Students with Disabilities at Postsecondary Education Institutions," 1998.

FOR MORE INFORMATION:
NCES 1999–187,
NCES 1999–046

# Faculty Characteristics

## Faculty Salaries

***Although the salary of the average faculty member has risen in constant dollars since 1980–81, the purchasing power of salaries within each academic rank in 1972–73 has not been fully recovered.***

Adequate salaries are necessary to attract and retain highly qualified faculty in colleges and universities. Full-time instructional faculty generally experienced declines in the purchasing power of their salaries from 1972–73 to 1980–81, during which time the salary of the average faculty member fell 17 percent after adjusting for inflation. By 1997–98, average pay had risen to recover most of these losses.

The distribution of faculty across ranks has shifted over time (NCES 76–211; NCES 1999–193), so the average overall salary in 1997–98 was about the same as that in 1972–73. However, after adjusting for inflation, average salaries of full-time instructional faculty in each rank remained below their 1972–73 values.

In 1997–98, average salaries of full-time faculty were similar in public and private 4-year institutions for all ranks combined and for associate professors, assistant professors, instructors, and those with no academic rank. Salaries for professors and lecturers were higher in private 4-year institutions than in public institutions (supplemental table 55-1).

Within the public sector, average salaries were $8,000 higher in 4-year than in 2-year public institutions. Professors, associate professors, and assistant professors had higher average salaries in 4-year than in 2-year public institutions. In contrast, instructors, lecturers, and those with no academic rank had higher average salaries in 2-year public institutions (supplemental table 55-1).

**FACULTY SALARIES: Average salaries (in constant 1997–98 dollars) of full-time instructional faculty on 9- or 10-month contracts at degree-granting 2- and 4-year institutions, by academic rank and institutional control: 1972–73, 1980–81, 1996–97, and 1997–98**

| Academic rank and institutional control | Academic year 1972–73 | 1980–81 | 1996–97 | 1997–98 |
|---|---|---|---|---|
| **All faculty** | **$52,341** | **$43,499** | **$51,725** | **$52,335** |
| Academic rank | | | | |
| Professor | 72,493 | 57,408 | 67,834 | 68,731 |
| Associate professor | 55,077 | 43,335 | 50,176 | 50,828 |
| Assistant professor | 45,450 | 35,284 | 41,404 | 41,830 |
| Instructor | 40,558 | 28,334 | 31,743 | 32,449 |
| Lecturer | 43,957 | 32,297 | 35,578 | 35,484 |
| No rank | 47,883 | 41,692 | 44,979 | 45,268 |
| Institutional control | | | | |
| Public | 52,945 | 44,327 | 51,189 | 51,638 |
| Private* | 50,815 | 41,242 | 53,030 | 54,169 |

* Includes only private not-for-profit institutions in 1997–98 and both not-for-profit and for-profit institutions in earlier years.

NOTE: The Consumer Price Index (CPI) was used to adjust salaries to constant 1997–98 dollars. See *Supplemental Note 3* for more information.

SOURCE: U.S. Department of Education, NCES. Integrated Postsecondary Education Data System, "Salaries, Tenure, and Fringe Benefits of Full-Time Instructional Faculty Survey" (IPEDS-SA), selected years.

FOR MORE INFORMATION:

Supplemental Notes 3 and 5

Supplemental Table 55-1

NCES 76–211, NCES 1999–036,
NCES 1999–193

# College Resources

## Time Allocation of Full-Time Faculty

*Full-time instructional faculty at postsecondary, degree-granting institutions worked 53 hours weekly in fall 1992, devoting most of their time to teaching. The time allocated to teaching and research varied considerably by institution and academic rank.*

Teaching students is only one aspect of a faculty member's job. Faculty also devote time to research, administrative tasks, and other professional activities. Issues such as the length of the faculty work week, the amount of time faculty spend in the classroom, and the allocation of time among work activities may inform debates about workload, tenure, instructional time, and the overall quality of undergraduate education.

Across all types of postsecondary, degree-granting institutions, the average full-time faculty member with any instructional responsibilities worked 53 hours per week in fall 1992. On average, full, associate, and assistant professors worked longer hours than instructors and lecturers. In addition, faculty at research and doctoral institutions typically worked longer hours than their colleagues at other types of institutions.

Full-time instructional faculty spent 55 percent of their work hours performing teaching activities, 18 percent conducting research, and 13 percent performing administrative tasks. (See *Supplemental Note 14* for a detailed description of what is included in each type of activity.)

Full, associate, and assistant professors tended to spend a higher percentage of their work time conducting research than did other types of faculty. Assistant professors, instructors, and lecturers spent a higher proportion of their time performing teaching activities than did full professors.

Overall, faculty at research and doctoral institutions spent more time doing research and less time teaching than did faculty at other types of institutions.

**FACULTY TIME ALLOCATION: Average number of hours worked per week and percentage distribution of time spent on various work activities by full-time instructional faculty, by type of institution and academic rank: Fall 1992**

| Type of institution and academic rank | Average hours worked per week | Percentage of time spent[1] | | | |
|---|---|---|---|---|---|
| | | Teaching | Research | Administration | Other |
| **Total[2]** | **52.6** | **55.0** | **17.8** | **12.5** | **14.6** |
| Type of institution | | | | | |
| Research | 56.9 | 39.4 | 32.2 | 12.7 | 15.5 |
| Doctoral | 54.6 | 45.9 | 23.2 | 14.0 | 16.8 |
| Comprehensive | 52.3 | 60.5 | 13.6 | 12.3 | 13.6 |
| Liberal arts | 52.3 | 64.3 | 9.8 | 14.3 | 11.4 |
| 2-year | 46.9 | 70.5 | 4.5 | 10.6 | 14.3 |
| Academic rank | | | | | |
| Full professor | 54.3 | 50.2 | 21.6 | 15.0 | 13.0 |
| Associate professor | 53.6 | 52.4 | 19.5 | 13.5 | 14.4 |
| Assistant professor | 53.4 | 55.3 | 19.8 | 9.2 | 15.5 |
| Instructor | 47.7 | 69.1 | 5.9 | 9.4 | 15.5 |
| Lecturer | 49.0 | 61.3 | 10.7 | 12.0 | 16.0 |

[1] Percentages may not add to 100.0 due to rounding.

[2] Included in the total but not shown separately are those with other academic ranks, no academic rank, or at other types of postsecondary institutions.

NOTE: The data are based on full-time faculty who have some instructional duties for credit and who have faculty status in fall 1992. Instructional duties include teaching one or more classes for credit or advising or supervising students for credit.

SOURCE: U.S. Department of Education, NCES, 1993 National Study of Postsecondary Faculty (NSOPF:1993).

FOR MORE INFORMATION:
Supplemental Note 3, 14

## Other College Resources

# Part-Time Instructional Faculty and Staff

*Postsecondary institutions rely heavily on part-time faculty. In 1992, 4 out of 10 instructional faculty and staff worked part time.*

Part-time faculty provide institutions with a flexible work force that allows them to adjust to enrollment changes, fill temporary vacancies, teach specialized courses, and reduce faculty costs. However, part-time faculty are less likely to have tenure and lack the job benefits provided to full-time faculty (NCES 97–470).

Some faculty teach part time by choice, such as parents who care for children, but others do not. Those who teach part time but desire full-time work sometimes teach at several institutions in order to support themselves (Gappa and Leslie 1993). Consequently, they may be less available to students and less able to participate in the activities of any one institution.

In fall 1992, 42 percent of postsecondary instructional faculty and staff worked part time. Instructional faculty and staff at 2-year institutions were the most likely to be employed part time (60 percent compared with 23 to 39 percent at other types of institutions).

In each type of postsecondary institution, instructors and lecturers were more likely than faculty of higher academic rank to be employed part time.

Women were more likely than men to work part time at each type of 4-year postsecondary institution.

**USE OF PART-TIMERS: Percentage of postsecondary instructional faculty and staff who were employed part time, by sex and academic rank: Fall 1992**

| Sex and academic rank | Total | Type of institution | | | | | |
|---|---|---|---|---|---|---|---|
| | | Research | Doctoral | Comprehensive | Liberal arts | 2-year | Other |
| **Total*** | **41.6** | **23.4** | **32.6** | **38.6** | **35.7** | **60.2** | **37.8** |
| Sex | | | | | | | |
| Male | 37.2 | 19.0 | 27.4 | 33.3 | 29.8 | 60.8 | 35.0 |
| Female | 48.9 | 34.1 | 43.2 | 46.7 | 43.3 | 59.4 | 45.0 |
| Academic rank | | | | | | | |
| Full professor | 16.7 | 10.3 | 13.9 | 16.9 | 17.8 | 25.1 | 29.1 |
| Associate professor | 15.4 | 16.6 | 11.0 | 9.5 | 9.4 | 22.2 | 28.9 |
| Assistant professor | 16.3 | 14.8 | 13.0 | 11.2 | 17.0 | 24.5 | 27.2 |
| Instructor | 74.5 | 65.9 | 73.8 | 78.2 | 75.8 | 74.7 | 66.2 |
| Lecturer | 79.3 | 59.6 | 81.6 | 85.6 | 80.4 | 95.1 | 82.2 |

* Included in the total but not shown separately are those with other or no academic rank and those at other types of postsecondary institutions.

NOTE: Percentages based on faculty and staff who had some instructional duties for credit in fall 1992. Instructional duties include teaching one or more classes for credit or advising or supervising students' academic activities.

SOURCE: U.S. Department of Education, NCES. 1993 National Study of Postsecondary Faculty (NSOPF:1993).

FOR MORE INFORMATION:
Supplemental Note 5
NCES 97–470

## Section 6

# *Societal Support for Learning*

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# Summary: Societal Support for Learning

At the broadest level, this section addresses the contributions made by society and its subgroups—the family, the individual, and employers, and other organizations outside school—to education. Consequently, it combines traditional concerns about financial support for education in schools and colleges with issues of the amounts of time and attention parents devote to their children's learning, the support that exists in the community and other settings such as the workplace for learning, and the consistency of cultural messages about the value of knowledge and learning expressed across these settings. An important theme is the extent to which education is considered to be a private or individual responsibility as distinct from a public or collective responsibility.

## PARENTAL AND FAMILY SUPPORT FOR LEARNING

Policymakers, researchers, and educators agree that a family's involvement with education is closely linked to children's success in school (Henderson and Berla 1994). *Indicator 59* shows that the percentage of parents who participated in some way in school events or meetings increased between 1996 and 1999. Such an increase may reflect favorable changes in parental priorities and willingness to exert energy on behalf of their children's learning. Despite the overall increase, however, parental involvement decreases as children move from elementary to middle to high school (*Indicator 59*). This is due partly to the reduced opportunities for involvement as children grow older (NCES 98-091). *Indicator 59* also shows that white students were more likely than black or Hispanic students to have parents who attended a general meeting, attended a school event, or acted as a volunteer or served on a committee in 1999.

Parental perceptions of school environments and practices can also be an indicator of support. Favorable perceptions are positively related to the frequency of a family's involvement at school (NCES 97-327). The percentage of children with parents who reported they were very satisfied with their child's school declined from 1993 to 1999 but remained similar with respect to the child's teachers, the school's academic standards, and the school's order and discipline (*Indicator 60*). Despite this decrease, more than half of children in grades 3-12 had parents who reported they were very satisfied with the learning environment at the schools their children attended in 1999. In addition, parents who selected the school their child attends were more likely to be very satisfied with the schools than parents of children attending assigned schools (*Indicator 46*). The percentages of white and black children with parents who were very satisfied were similar in 1999. Parents of Hispanic students were more likely to be very satisfied than the parents of white and black students (*Indicator 60*).

Family support for learning is demonstrated not only through the support of schools but also by the time and attention they devote to their children's learning outside of school. Among children in grades K-8 in 1999, 19 percent received care from a relative, 7 percent from a nonrelative, 19 percent attended a center-based program, and 12 percent cared for themselves (*Indicator 58*). The remainder received care from their parents. Differences in arrangements for before- and after-school care can affect opportunities for learning social skills and developing interests. Such differences in types and lengths of care children receive before and after school can have both positive and negative effects on their development, such as when young children must take care of themselves before or after school.

## Summary: Societal Support for Learning

**Continued**

Parents and families also impart early literacy skills to their children through direct and indirect means. In 1996, 83 percent of parents reported that a parent or other member of the family read to their 3- to 5-year-old child at least 3 times in the past week, which was an increase from 71 percent in 1991. In 1996, 38 percent of parents also reported that their 3- to 5-year-old child visited the library at least once in the last month (*Indicator 34, Condition of Education 1999*).

### FINANCIAL SUPPORT FOR LEARNING

Finances are central to all aspects of education. Inherent in the decentralized system of public education in the United States are differences in "how," "to whom," and "how many" public dollars are allocated to schools. Differences in expenditures are of special interest when considering children in particular categories of historical concern, such as minority status, poverty, and other at-risk factors.

Although state governments support elementary and secondary education through more than 15,000 school districts, many of these districts have considerable responsibility for raising school funds, typically through property or other local taxes. Other districts rely primarily on other government units, such as counties, to raise funds for local schools (NCES 98–018 and *Indicator 63*). If districts with less funding per capita are less able to provide a high-quality education to students, the disparity in per-pupil school funding among school districts becomes a legitimate concern among parents, teachers, and practitioners. The proportion of total disparity in average per-pupil instructional spending among school districts due to differences within states declined from 1992–93 to 1996–97 school years (*Indicator 64*), while the proportion of the total variation in the average instructional spending due to differences among states increased.

Sources of public education funding also vary across regions. School districts in the Northeast have historically relied to a greater degree on local funding than in the West, where schools have relied more on state than on local funding (*Indicator 63*). Between 1991–92 and 1994–95, the West was the only region with an increase in the proportion of local funding, but this increase was not sustained in the two years that followed (*Indicator 63*).

In 1995–96, school districts with the largest concentrations of children living in poverty spent considerably less per student than districts with smaller concentrations (*Indicator 61*). During that same period, public school districts serving metropolitan areas spent more per student for instruction, support services, and capital outlay combined than other districts.

As real personal income per capita has risen in the recent past, public revenue for education per elementary or secondary student has also increased. During the 1990s, however, revenue as a percentage of personal income, adjusted for the number of students and population size, decreased slightly, indicating that a somewhat smaller percentage of personal income is being spent on elementary and secondary education than in the past (*Indicator 62*).

Undergraduate tuition, room, and board have been increasing, making college a greater financial cost for students. In addition, the opportunity costs and loss of potential income associated with not obtaining a postsecondary education have also increased (NCES 98–088). As public effort for postsecondary students in degree-granting institutions has generally de-

## Summary: Societal Support for Learning

**Continued**

clined since 1966 (*Indicator 62*), students and their families have become increasingly responsible for meeting these increased college costs and, as a result, tuition and fees have increased as a proportion of total public revenues for postsecondary education in degree-granting institutions. Faced with the challenge of meeting these costs, how and when parents begin financial planning can affect their children's access to postsecondary education and their choice of institutions to attend. In 1999, 93 percent of parents of students in grades 6–12 expected their children to continue their education after high school, and 60 percent of parents surveyed had started saving money or making financial plans for their children's further education (*Indicator 66*).

In addition, the percentage of high school seniors who reported they would definitely complete a bachelor's degree increased considerably between 1980 and 1997 (*Indicator 24*). The high percentage of parents expecting their children to enroll in postsecondary education underscores the risks that "first-generation" students face (*Indicator 56, Condition of Education 1999*). First-generation students, who are the first members of their families to enroll in any education beyond high school, are more likely than their peers to be from a low-income family, have lower achievement (as measured by the Collegiate Assessment of Academic Proficiency), and have lower overall degree aspirations (NCES 98–082). Low-income families rarely have savings or assets against which to borrow and are unlikely to have enough to pay for this postsecondary education with their current income.

The price of college attendance can also affect a student's access to postsecondary education. Students and their families are responsible for the net price of college attendance, which is the difference between the total price of attendance and grants received. In 1995–96, the net price varied based on the type of institution attended and family income; the net price was less for low and lower middle income students than for upper middle and high income students (*Indicator 67*). Nevertheless, a family at the 20th income percentile would be required to spend 32 percent of its income to pay for tuition, room, and board at an average-priced public college or university in 1995 and 89 percent at an average-priced private one (NCES 1999–022).

Total expenditures per full-time-equivalent (FTE) student increased about 16 percent between 1980 and 1992 at public institutions. In contrast, expenditures rose much more (about 43 percent) at private institutions during the same period (NCES 95–769). In 1995–96, instructional expenditures per FTE student varied depending on the number of graduate and first-professional students enrolled in the institution (*Indicator 65*). Although instructional costs per FTE student were comparable among primarily undergraduate institutions, instructional expenditures per FTE student varied more and were higher among research universities and doctoral institutions.

# Family Support

## Before and After School Care

*Among children in grades K–8 who received care on a regular basis from someone other than a parent before and after school in 1999, more received care from a relative or attended a center-based program than received care from a nonrelative or cared for themselves.*

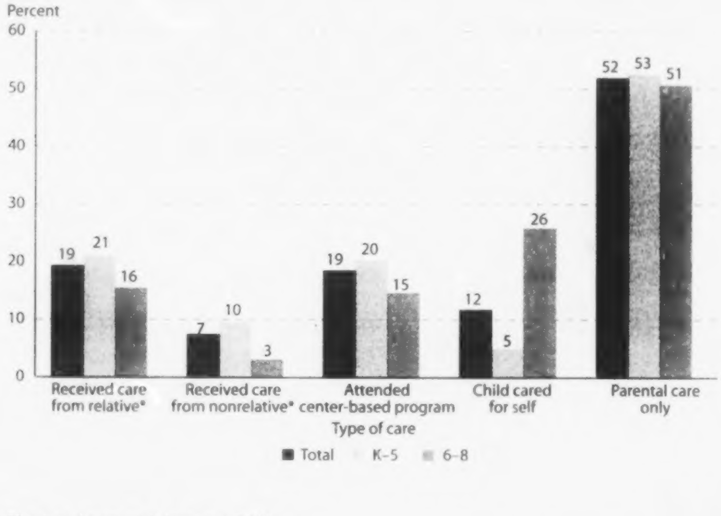
Many children spend the time before or after school either alone or in the care of someone other than a parent. The manner in which a child spends this time may influence the development of both social skills and the ability to form relationships with other people (McCartney and Clarke-Stewart 1999).

Among children in grades K–8, 19 percent received care from a relative, seven percent received care from a nonrelative, 19 percent attended a center-based program, and 12 percent cared for themselves in 1999. In contrast, about half of children in grades K–8 received before and after school care from a parent.

Black children were more likely to receive nonparental before or after school care than white or Hispanic children. Black and Hispanic children were more likely than white children to receive care from a relative. In addition, black children were more likely to attend center-based programs than white or Hispanic children. The percentage of children who received care from a nonrelative or who cared for themselves was similar across racial-ethnic groups in 1999.

The percentage of children who received care from a relative was greater for poor children than for nonpoor children. Whereas poor and nonpoor children were equally likely to have attended a center-based program, nonpoor children were more likely to care for themselves. The percentage of children who received care from a nonrelative, attended a center-based program, or cared for themselves was generally similar, regardless of parents' highest education level (see supplemental table 58-1).

**BEFORE AND AFTER SCHOOL CARE: Percentage of children in grades K–8 who received various types of care before and after school: 1999**



* Care received from a relative or nonrelative may be provided inside or outside of the child's home.

NOTE: The National Household Education Survey (NHES) asked parents or guardians about the type of care received by the child on a regular basis before or after school. "Received care from a relative" includes care received from someone other than the parent or guardian. See the glossary for the definitions of the types of care arrangements. Percentages may not add to 100.0 because children can be included in more than one type of care arrangement.

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Parent Interview Component).

FOR MORE INFORMATION

Supplemental Notes 2, 3

Supplemental Table 58-1

McCartney and Clarke-Stewart 1999

BEST COPY AVAILABLE

# Family Support

## Parental Involvement in Schools

*The levels of parental involvement in American elementary and secondary education are relatively high, but the frequency of such participation depends on the child's grade in school as well as parental income and educational attainment.*

Effective parental involvement in education requires a working partnership among parents, teachers, and administrators. Many schools actively encourage parents to increase their involvement in their children's education. Parental involvement can include attendance at a general meeting (open houses or back-to-school nights), a scheduled meeting with a teacher (parent-teacher conferences), a school event (class plays, sports, or science fairs), or acting as a volunteer or committee member.

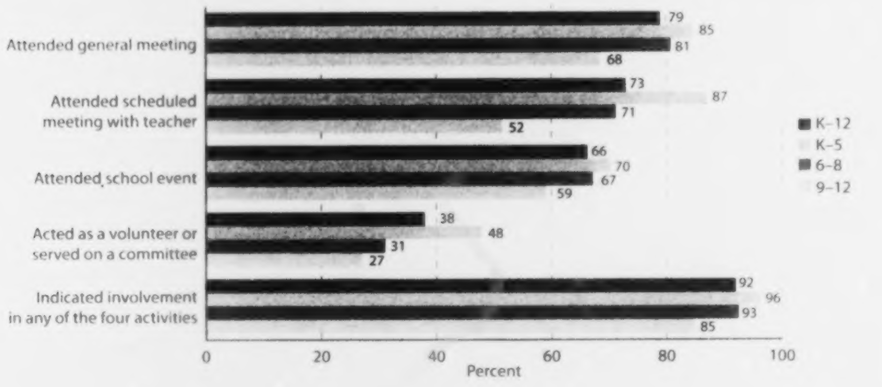
In both 1996 and 1999, at least 90 percent of children had parents who participated in at least one of these activities. However, parents in both years were least likely to participate in the activity that required the most time—acting as a volunteer or serving on a committee (see supplemental table 59-1).

Parental involvement typically is lower for children in higher grades. As an illustration, in both years, at least 86 percent of children in grades K–5 had parents who reported that they had attended a scheduled meeting with a teacher. In contrast, among children in grades 6–8 and 9–12 about 70 percent and 50 percent, respectively, had parents who reported attendance at such a meeting.

Parents' involvement is related to household income and their level of education. As household income and educational attainment increase, the percentage of students whose parents reported attending a general or a scheduled meeting with a teacher, attending a school event, or serving as a volunteer or committee member also increases.

Among racial-ethnic groups, white students are more likely than black and Hispanic students to have parents who report participation in school activities. Black and Hispanic students were equally likely to have parents who participated in the four categories of activities.

**PARENTAL INVOLVEMENT: Percentage of students in grades K–12 whose parents reported involvement in specific activities in their child's school: 1999**



NOTE: Ungraded students or children who were home schooled were not included in this analysis; these students accounted for 1.6 percent of students in grades K–12.

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Parent and Family Involvement in Education Component).

FOR MORE INFORMATION
Supplemental Note 2
Supplemental Table 59-1

BEST COPY AVAILABLE

# Community Support

## Parents' Attitudes Toward Schools

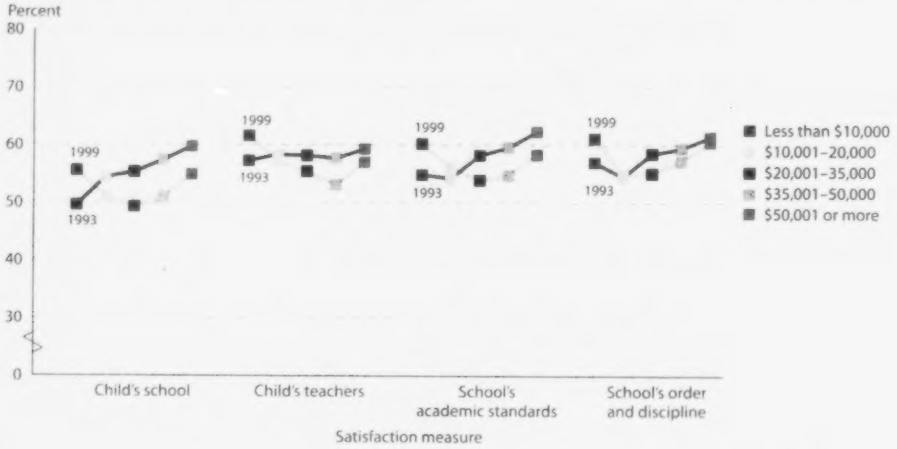
*In 1999, at least half of children in grades 3–12 had parents who reported that they were very satisfied with their child's school, their child's teacher, the school's academic standards, and the school's order and discipline.*

Parents' opinions of their children's schools provide an indicator of the perceived relative health of U.S. education. Examining parents' level of satisfaction with schools can help to define perceived problems within America's schools and focus reform efforts on those issues.

The percentage of children in grades 3–12 with parents who reported they were very satisfied with their child's school decreased from 56 percent in 1993 to 53 percent in 1999. In contrast, the percentage of those with parents who reported they were very satisfied with their child's teacher, the school's academic standards, and the school's order and discipline remained similar. In 1993, the percentage of children with parents who were very satisfied with their child's school, the school's academic standards, and the school's order and discipline was higher as household income increased. This relationship was not evident in 1999. The percentage of children with parents who were very satisfied with these three areas in 1993 was higher among those with higher and lower family income levels and lower among those at the middle income levels (see supplemental table 60-1).

In 1993, black children in grades 3–12 were less likely than their white peers to have parents who reported that they were very satisfied with these four measures. However, between 1993 and 1999, the percentages of white children with parents who reported being very satisfied decreased, while the percentages of black children with very satisfied parents remained similar. Due to these changes, the percentages of white and black children with very satisfied parents were similar in 1999. Among all racial-ethnic groups in 1999, Hispanic children had the highest percentage of parents who were very satisfied with the four areas assessed (see supplemental table 60-1).

**ATTITUDES TOWARD SCHOOL: Percentage of children in grades 3–12 whose parents were very satisfied with various aspects of their schools, by family income: 1993 and 1999**



SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1993 and 1999 (Parent Interview Component).

FOR MORE INFORMATION
Supplemental Note 2
Supplemental Table 60-1

# Financial Support

## Public Elementary and Secondary Expenditures

*Public school expenditures vary depending upon the poverty level and metropolitan status of school districts.*

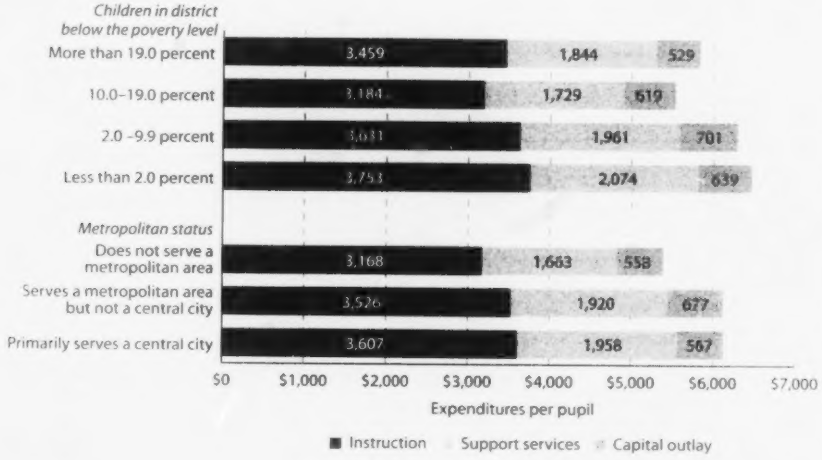
School districts with the smallest concentrations of children living in poverty spent more per student for instruction and support services than districts with larger concentrations of poverty. Public school districts serving central cities spent more per student for instruction, support services, and capital outlay combined than districts in other types of metropolitan areas.

School districts with less than two percent of children living below the poverty level spent an average of $3,753 per student on instruction in 1995–96, while districts with a higher percentage spent less. This same pattern is evident with support services. The districts with the lowest poverty levels spent an average of $2,074 per pupil on support services, while higher-poverty districts spent less than $2,000 per pupil. Average per-pupil expenditures on capital outlay ranged between $529 and $701.

School districts primarily serving a central city spent more per pupil on instruction, support services, and capital outlay than districts that did not serve a metropolitan area in 1995–96. Average per-pupil expenditures on instruction, support services, and capital outlay by public elementary and secondary schools primarily serving a central city were $3,607, $1,958, and $567, respectively. The same figures for public schools that did not serve a metropolitan area were $3,168, $1,663, and $558, respectively. These differences may be partially due to differences in the costs of living or other factors between central cities and nonmetropolitan areas.

Geographically cost-adjusted expenditures on instruction, support services, and capital outlay were considerably less for school districts that did not serve a metropolitan area than the cost-adjusted expenditures for school districts serving a metropolitan area. Average per-pupil expenditures for instruction, support services, and capital outlay were similar between school districts serving a metropolitan area but not a central city and those primarily serving a central city.

**PUBLIC FINANCIAL SUPPORT: Public school district expenditures per student, by function, poverty level, and metropolitan status: School year 1995–96**



NOTE: In the Common Core of Data (CCD), poverty is defined by a set of money-income thresholds determined by the Bureau of the Census that vary by family size and composition. If a family's total income is less than that family's threshold, then that family, and every individual in it, is considered to be poor.

SOURCE: U.S. Department of Education, NCES, Common Core of Data, "Public School District Universe Survey," 1995–96, and "Public School District Financial Survey," 1995–96.

FOR MORE INFORMATION:
Supplemental Tables 61-1, 61-2

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# Financial Support

## National Indicators of Public Effort

***Public revenues per student have increased at the elementary/secondary level in recent years but not as fast as personal income per capita. Because public revenues per student for postsecondary education in degree-granting institutions have remained relatively unchanged since the mid-1960s, the public funding of postsecondary education has also not risen as fast as personal income per capita.***

The level of public investment in education can be measured in a number of ways. Two are considered here: public revenue for education per student and the ratio of revenue for education per student to per capita personal income. The latter measure is revenue raised for the education of students relative to taxpayers' capacity to provide these resources.

Since 1930, real personal income per capita has generally risen. This coincides with increased public revenue for education per elementary/secondary student adjusted for inflation, except for a temporary decline in the early 1980s. Recently, total public revenues for elementary and secondary education as a percentage of personal income, adjusted for the number of students and population size, has decreased, although it is still higher than it was between 1930 and 1988.

The pattern for postsecondary education has been different. Since 1966, public revenue per postsecondary student in degree-granting institutions has fluctuated within a relatively narrow band, with the exception of the low point in the early 1980s.

The ratio of revenue per postsecondary student in degree-granting institutions to per capita personal income was highest in 1966. Since then, it has generally declined, except for a brief period during the mid-1980s. Since the early 1980s, this decline in public effort has coincided in public institutions with an increase in private effort. Tuition and fees charged to students as individuals by public, degree-granting postsecondary institutions increased from 13 percent of the total revenues in 1980 to 19 percent in 1996, while the proportion coming from state appropriations decreased from 44 percent to 32 percent in the same period (NCES 2000–031).

**PUBLIC FINANCIAL SUPPORT: Indicators of public effort to fund education (in constant 1998 dollars), by level: Selected school years ending 1930–97**

| School year ending | Per capita personal income* | Public education revenue per student* | | Per student revenue as a percentage of per capita personal income | |
|---|---|---|---|---|---|
| | | Elementary/ secondary | Postsecondary education | Elementary/ secondary | Postsecondary education |
| 1930 | $6,609 | $709 | $1,490 | 10.7 | 22.5 |
| 1940 | 6,958 | 949 | 1,671 | 13.6 | 24.0 |
| 1950 | 9,536 | 1,325 | 2,745 | 13.9 | 28.8 |
| 1960 | 12,784 | 2,021 | 3,881 | 15.8 | 30.4 |
| 1966 | 15,703 | 2,697 | 4,923 | 17.2 | 31.3 |
| 1970 | 17,340 | 3,435 | 5,390 | 19.8 | 31.1 |
| 1980 | 20,153 | 4,400 | 4,742 | 21.8 | 23.5 |
| 1984 | 21,506 | 4,531 | 4,492 | 21.1 | 20.9 |
| 1988 | 23,723 | 5,293 | 5,225 | 22.3 | 22.0 |
| 1992 | 24,169 | 5,910 | 4,929 | 24.5 | 20.4 |
| 1994 | 24,538 | 5,982 | 5,043 | 24.4 | 20.6 |
| 1996 | 25,376 | 6,066 | 5,223 | 23.9 | 20.6 |
| 1997 | 25,954 | 6,145 | — | 23.7 | — |

— Not available.

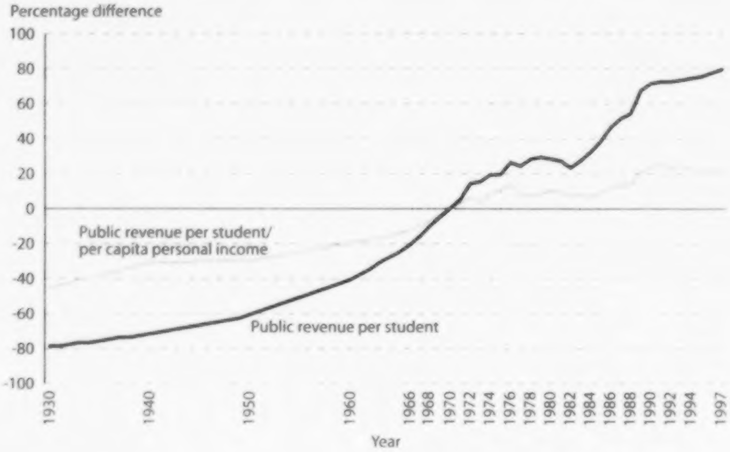
* See *Supplemental Note 3* for information on the Consumer Price Index (CPI).

NOTE: Public funds for postsecondary education may be used at both public and private institutions. Enrollment in both publicly and privately controlled degree-granting institutions is included. For more information about the calculation of this indicator, see *Supplemental Note 15*. Data for additional years appear in Supplemental Table 62-1.

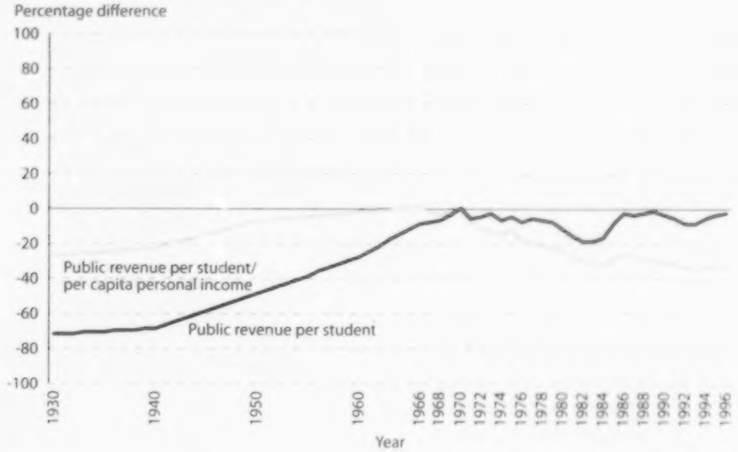
SOURCE: U.S. Department of Education, NCES. *Digest of Education Statistics 1999* (NCES 2000–031); U.S. Department of Education, NCES. *120 Years of American Education: A Statistical Portrait* (NCES 93–442), 1993.

FOR MORE INFORMATION:
Supplemental Notes 3, 5, 14
Supplemental Table 62-1
NCES 2000–031, NCES 93–442

**PUBLIC FINANCIAL SUPPORT: Indicators of public effort to fund elementary and secondary education as a percentage of 1970 values: Selected years 1930–97**



**PUBLIC FINANCIAL SUPPORT: Indicators of public effort to fund postsecondary education at degree-granting institutions as a percentage of 1970 values: Selected years 1930–96**



FOR MORE INFORMATION
Supplemental Table 62-1
NCES 93-442, NCES 2000-031

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# Financial Support

## Change in the Sources of Public School Financing

*Differences in the proportion of local to state and federal funding generally persist across the United States, with some changes in revenue sources occurring mainly in the West and Midwest.*

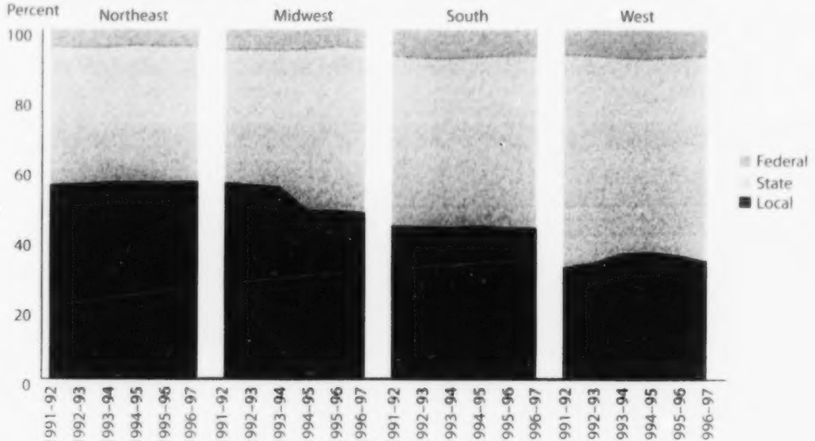
Local funding and control of public education may be seen as essential to maintaining public commitment to local schools and ensuring that education reflects community values and aspirations. On the other hand, reliance on local funding to maintain this relationship between the community and public schools may be viewed as leading to inequities in the financing of education because of differences in local wealth. At the same time, school districts with higher levels of state funding may be more vulnerable to funding shortfalls during economic recessions than districts with higher proportions of local funding, because local property taxes provide relative stability compared to the sales and income taxes upon which states tend to depend to fund low wealth school districts (Monk and Brent 1997). Over the years these conflicting factors and concerns have resulted in different proportions of state and local funding among the states.

This indicator provides an overview of the proportion of school revenue derived from local sources, from 1991–92 to 1996–97, for each region of the United States. The percentage of federal funding over this period remained similar between 1991–92 and 1996–97, accounting for about seven percent of funding nationwide (see supplemental table 63-1). Therefore, local and state funding in this indicator are inversely related: increases in local funding mean less state funding and vice versa.

During this period the only increases in local funding occurred in the West between 1991–92 and 1994–95 where schools have historically relied more on state funding than local funding. The only decrease in local funding occurred in the Midwest, where local funding dropped between 1993–94 and 1994–95 and has remained at the lower level since. This decrease coincides with reduction of the property tax in Michigan.

In the Northeast and South no shifts in funding were observed. Historic funding differences—whereby the Northeast has relied to a greater degree on local funding than the South—persisted.

**PUBLIC FINANCIAL SUPPORT: Percentage distribution of revenues for public elementary and secondary schools, by source of funds and region: 1991–92 to 1996–97**



NOTE: See the *Supplemental Note 4* for a list of states that compose each region. Includes a relatively small amount from nongovernmental private sources (gifts, tuition and transportation fees from patrons).

SOURCE: U.S. Department of Education, NCES, Common Core of Data, "Public School District Universe Survey," 1991–92 through 1996–97, and "Public School District Financial Survey," 1991–92 through 1996–97.

FOR MORE INFORMATION:
Supplemental Notes 3, 4
Supplemental Table 63-1
Monk and Brent 1997

# Financial Support

## Disparity in Public School Finance

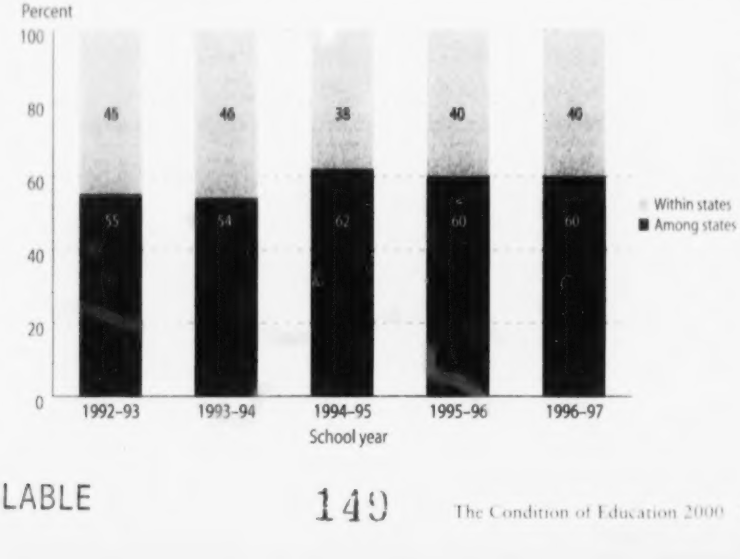
*The proportion of the differences in per pupil expenditures on instruction that exists among states as opposed to within states increased between 1992–93 and 1996–97.*

In recent years, a goal of educational reform in the states has been to reduce the differences in funding per pupil among school districts. An assumption of these reform efforts has been that districts with fewer resources to spend are less able to provide high quality of education to their students than districts with more resources (NCES 98-212). One way to examine disparities in school funding is to compare differences in the average level of per pupil funding per district among states and within states.

Examination of the average per pupil expenditures on instruction of school districts between 1992–93 and 1996–97 shows that the disparity in per pupil spending due to differences within states declined from 45 percent of the total variation nationally in 1992–93 to 38 percent in 1994–95. Between 1994–95 and 1996–97, the proportion of the differences in per pupil expenditures attributable to within-state differences increased slightly but still remained less than in 1992–93 or 1993–94. The school year Consumer Price Index (CPI) was used to adjust expenditures to 1996 constant dollars.

Conversely, the proportion of the disparity in per pupil instructional expenditures due to differences among states rose from 55 percent of the total variation nationally in 1992–93 to 62 percent in 1994–95 and stayed between 60 and 62 percent through 1996–97.

**FINANCE INEQUALITY: Percentage distribution of disparity in per-pupil instructional expenditures among and within states: School years 1992–93 to 1996–97**



NOTE: Disparity measures for within states and among states and the relative shares of each were calculated using analysis of variance (ANOVA). See Supplemental Note 15 for an explanation of ANOVA. Only instructional expenditures and unified school districts are included in the analysis.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Elementary-Secondary School District Finance Data Files, 1992–93 to 1996–97.

FOR MORE INFORMATION

Supplemental Notes 3, 15

Supplemental Table 64-1

NCES 98-212, NCES 2000-020

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# Financial Support

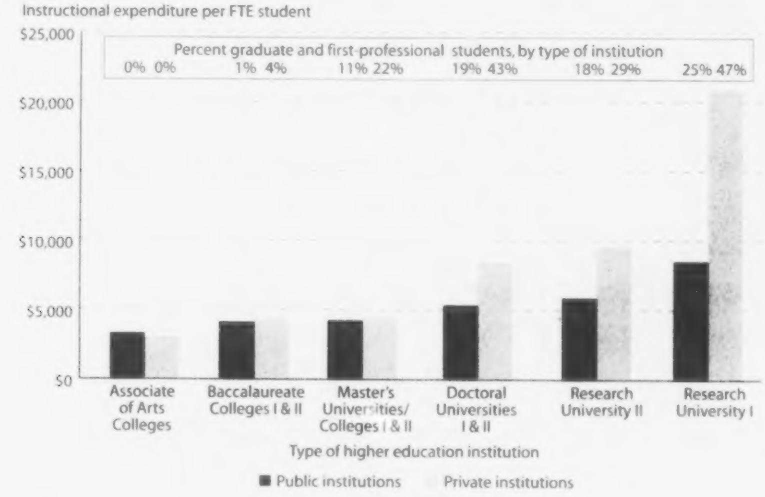
## Instructional Expenditures for Postsecondary Education

*The instructional expenditures per student of colleges and universities vary depending on the percentage of graduate and first-professional students enrolled.*

Due to increasing tuition, the cost of postsecondary education is an important issue for college administrators, policymakers, and the public. (NCES 1999–036, table 311, and National Commission on the Cost of Higher Education 1998). Undergraduate education costs, however, are difficult to determine because many postsecondary expenses (e.g., libraries, faculty, maintenance) cannot easily be apportioned among undergraduate and graduate students. This indicator sorts out some relationships between institutional expenditures for instruction per full-time-equivalent (FTE) student and the graduate and undergraduate enrollments of different types of degree-granting, 2- and 4-year postsecondary institutions.

Expenditures for instruction per FTE student averaged across institutions are comparable among primarily undergraduate institutions (i.e., institutions classified as Master's, Baccalaureate, and Associate of Arts institutions, where undergraduates constitute between 84 and 100 percent of the student body on average). The average instructional expenditure per FTE student per institution ranges from $3,157 among Associate of Arts institutions to $4,302 among Master's institutions. By contrast, the average cost of instruction per FTE student among institutions with large numbers of graduate students varies greatly between Research I institutions (where it is $12,645) and Research II and Doctoral institutions (where it is $6,935 and $6,593, respectively).

**HIGHER EDUCATION EXPENDITURES: Instructional expenditures per full-time-equivalent (FTE) student in degree-granting, 2- and 4-year postsecondary institutions: 1995–96**



NOTE: See *Supplemental Note 5* for definitions of the institutional classifications used.

SOURCE: U.S. Department of Education, NCES, 1995 Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF 1995) and 1995–96 "Finance Survey" (IPEDS-F: FY 1996).

FOR MORE INFORMATION:
Supplemental Notes 3, 5
Supplemental Tables 65-1, 65-2
NCES 1999–036

# Financial Support

## Financial Preparation for Postsecondary Education

*The parents of nearly all 6th- through 12th-graders expect their children to continue their education after high school. More high school students have parents who prepare financially than do students in earlier grades.*

Paying for postsecondary education is usually considered to be primarily the family's responsibility to the extent that they can afford to do so. Financial aid programs provide help to those lacking the necessary financial resources. How and when families begin preparing financially may affect their children's access to postsecondary education and the range of institutions they can attend.

In 1999, parents of 93 percent of students in grades 6–12 expected their children to continue their education after high school, although not all had begun preparing financially. Among students in these grades whose parents expected them to go on to postsecondary education, parents of 55 percent reported that they had obtained information on or an estimate of the cost of tuition and fees, 60 percent had started saving money or making other financial plans, and 38 percent had talked with someone or read materials about financial aid. Parents of 30 percent of the students had heard of the Lifetime Learning or the Hope Scholarship tax credits (see the glossary for definitions).

Parents of some students in grades 6–8 had engaged in these preparatory activities, but in each case, parents of more students in grades 9–12 had done so. In addition, the lower the family income, the less likely students in grades 6–12 generally were to have parents making any of these financial preparations for their children's postsecondary education.

SOURCE: U.S. Department of Education, NCES, National Household Education Survey (NHES), 1999 (Parent Interview Component).

**FINANCIAL PREPARATION: Percentage of students in grades 6–12 whose parents reported that their children would continue education after high school, and of those students, percentage whose parents reported having taken various steps to prepare to pay for their children's postsecondary education, by grade and family income: 1999**

| | | Of students whose parents expected them to go on to postsecondary education, percentage whose parents reported that they had | | | |
|---|---|---|---|---|---|
| Grade and family income | Percentage of students whose parents reported that they expected their children to continue education after high school | Obtained information/had an estimate of tuition and fees | Started saving money/making financial plans | Talked with someone/read materials about financial aid | Heard of Lifetime Learning or Hope Scholarship tax credits |
| **Total** | **93.3** | **55.2** | **60.3** | **38.4** | **29.7** |
| Grade | | | | | |
| 6–8 | 94.9 | 45.7 | 57.9 | 27.0 | 27.6 |
| 9–12 | 92.1 | 62.7 | 62.2 | 47.4 | 31.4 |
| Family income | | | | | |
| $25,000 or less | 89.1 | 35.2 | 38.5 | 31.5 | 19.8 |
| 25,001–50,000 | 92.7 | 50.9 | 58.2 | 38.7 | 27.6 |
| 50,001–75,000 | 95.6 | 66.2 | 69.2 | 43.1 | 33.9 |
| Over $75,000 | 97.6 | 75.4 | 81.5 | 42.4 | 40.4 |

# Financial Support

## Net Price of College Attendance

*One definition of the net price of college attendance is the amount that students pay using their own or borrowed funds. Net price varies by the type of institution students attend and by family income.*

The price of college attendance, including tuition and fees, room and board, books, and other expenses, may affect a student's access to college. Some students receive grants from federal, state, institutional, or private sources to help pay these expenses. Students are responsible for the difference between the total price of attendance and grants, which is called the "net price." Students cover this amount with their own financial resources, help from their families, or borrowing.

The price of attendance for dependent full-time, full-year undergraduates varies by institution type. In 1995–96, the average total price was $20,000 at private, not-for-profit 4-year institutions, compared with $10,800 at public 4-year institutions and $6,800 at public 2-year institutions. The average net price of attendance—total price reduced by all grants—was $15,100 at private, not-for-profit 4-year institutions, $9,400 at public 4-year institutions, and $6,100 at public 2-year institutions. Because grants are generally need based, taking into account total price and family financial resources, the net price of attendance was less for low- and lower middle-income students than for upper middle- and high-income students at 4-year institutions.

Among other strategies, students can use loans and employment to pay the net price of attendance. The average amount students borrowed ranged from $2,400 at private, not-for-profit 4-year institutions, to $1,600 at public 4-year institutions, to about $300 at public 2-year institutions. Students from public 2-year institutions contributed the most from earnings, on average, and students from private, not-for-profit 4-year institutions, the least.

**PRICE OF ATTENDING AND AID: Average price of college attendance and student financial aid for dependent full-time, full-year undergraduates, by type of institution and family income: Academic year 1995–96**

| Type of institution and family income | Tuition/fees | Total price | Grants | Net price | Student loans | Student earnings |
|---|---|---|---|---|---|---|
| **Total** | **$6,067** | **$12,603** | **$2,222** | **$10,379** | **$1,584** | **$3,018** |
| Public 4-year | 3,918 | 10,759 | 1,394 | 9,367 | 1,564 | 2,912 |
| Low income | 3,586 | 10,219 | 3,195 | 7,021 | 1,896 | 2,759 |
| Lower middle | 3,649 | 10,396 | 1,540 | 8,855 | 2,150 | 3,256 |
| Upper middle | 3,767 | 10,555 | 690 | 9,865 | 1,453 | 3,104 |
| High income | 4,541 | 11,674 | 494 | 11,187 | 921 | 2,565 |
| Private, not-for-profit 4-year | 13,250 | 20,003 | 4,934 | 15,069 | 2,403 | 2,248 |
| Low income | 11,709 | 18,155 | 6,990 | 11,165 | 2,830 | 2,301 |
| Lower middle | 12,641 | 19,156 | 6,779 | 12,377 | 3,049 | 2,490 |
| Upper middle | 13,316 | 19,999 | 4,692 | 15,310 | 2,632 | 2,254 |
| High income | 14,661 | 21,832 | 2,472 | 19,359 | 1,510 | 2,064 |
| Public 2-year | 1,316 | 6,761 | 694 | 6,069 | 263 | 4,226 |
| Low income | 1,202 | 6,369 | 1,750 | 4,621 | 276 | 4,375 |
| Lower middle | 1,315 | 6,883 | 556 | 6,326 | 311 | 4,159 |
| Upper middle | 1,416 | 6,954 | 188 | 6,766 | 303 | 4,087 |
| High income | 1,331 | 6,849 | 141 | 6,708 | 112 | 4,262 |

NOTE: Limited to students who attended only one institution. Averages include zero values. Income categories are described in *Supplemental Note 17*. In 1995–96, 49 percent of all undergraduates were considered financially dependent for financial aid purposes, and 58 percent of dependent students enrolled full-time, full-year.

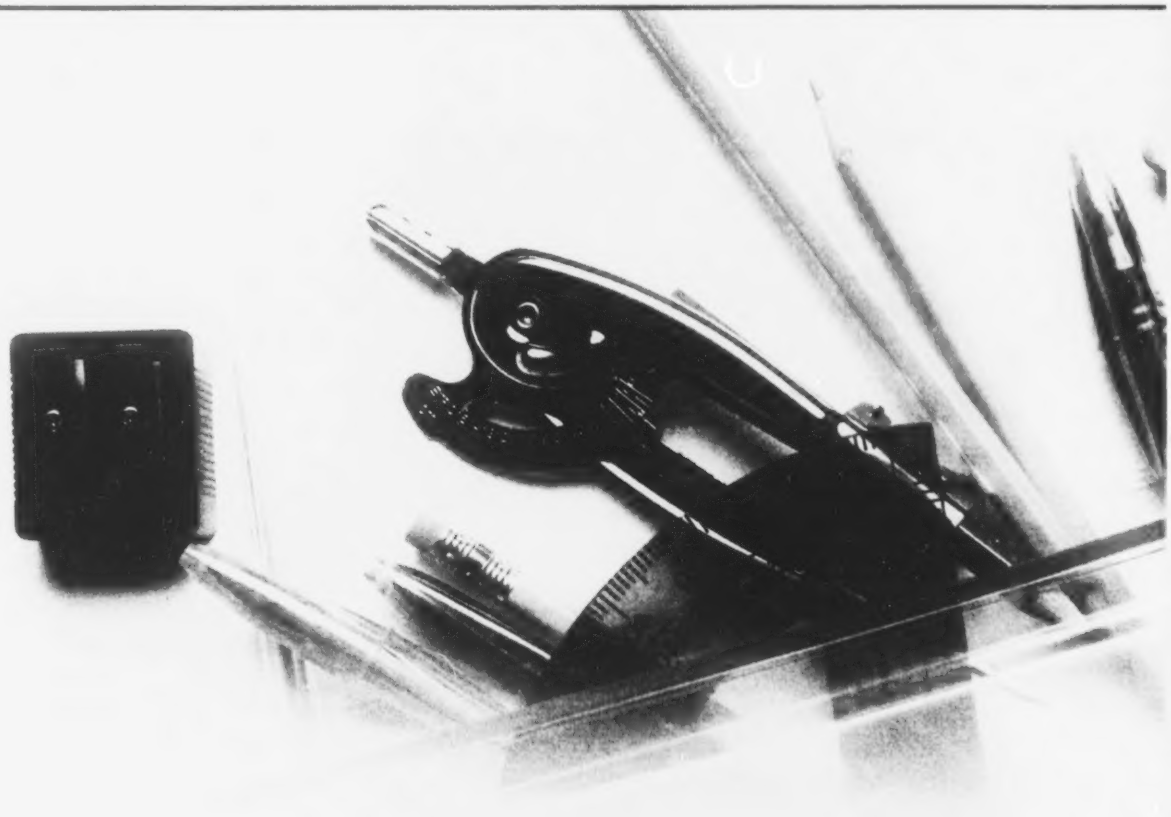
SOURCE: U.S. Department of Education, NCES, National Postsecondary Student Aid Study (NPSAS 1996), Undergraduate Data Analysis System.

FOR MORE INFORMATION

Supplemental Note 16

NCES 98-080

# Appendix 1
# Supplemental Tables



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# Educational Enrollment Rates, by Age

**Table 1-1** **Percentage of the population enrolled, by age and level: October 1970–98**

| October | Prekindergarten and kindergarten 3- to 5-year-olds | Elementary and secondary 6- to 17-year-olds | Postsecondary education institutions 18- to 24-year-olds | Postsecondary education institutions 25- to 34-year-olds |
|---|---|---|---|---|
| 1970 | 37.5 | 98.1 | 25.7 | 5.5 |
| 1971 | 39.1 | 98.2 | 26.2 | 6.2 |
| 1972 | 41.6 | 97.7 | 25.5 | 6.6 |
| 1973 | 40.9 | 97.5 | 24.0 | 6.5 |
| 1974 | 45.2 | 97.5 | 24.6 | 7.5 |
| 1975 | 48.7 | 97.7 | 26.3 | 8.1 |
| 1976 | 49.2 | 97.7 | 26.7 | 7.9 |
| 1977 | 49.5 | 97.7 | 26.1 | 8.6 |
| 1978 | 50.3 | 97.7 | 25.3 | 7.7 |
| 1979 | 51.1 | 97.6 | 25.0 | 7.8 |
| 1980 | 52.5 | 97.5 | 25.7 | 7.6 |
| 1981 | 51.2 | 97.8 | 26.1 | 7.7 |
| 1982 | 51.7 | 98.0 | 26.6 | 7.7 |
| 1983 | 52.5 | 98.2 | 26.2 | 7.8 |
| 1984 | 51.6 | 97.9 | 27.1 | 7.5 |
| 1985 | 54.6 | 98.1 | 27.8 | 7.5 |
| 1986 | 54.9 | 98.1 | 27.9 | 7.1 |
| 1987 | 54.6 | 97.9 | 29.6 | 7.0 |
| 1988 | 54.4 | 98.1 | 30.3 | 6.9 |
| 1989 | 54.6 | 98.1 | 30.9 | 7.2 |
| 1990 | (*) | 98.4 | 32.0 | 7.4 |
| 1991 | 55.7 | 98.5 | 33.3 | 7.8 |
| 1992 | 55.5 | 98.5 | 34.4 | 7.5 |
| 1993 | 55.1 | 98.5 | 34.0 | 7.5 |
| 1994 | 61.0 | 98.4 | 34.6 | 8.3 |
| 1995 | 61.8 | 98.0 | 34.3 | 8.2 |
| 1996 | 61.2 | 96.8 | 35.5 | 8.6 |
| 1997 | 64.9 | 98.2 | 36.8 | 8.3 |
| 1998 | 64.5 | 97.9 | 36.5 | 8.8 |

* Comparable data were not available for children ages 3 and 4 due to changes in survey procedures; see *Supplemental Note 1* for more information.

NOTE: Prekindergarten and kindergarten includes nursery schools. "Higher education institutions" includes regular programs in 2- and 4-year colleges and universities only. In 1994, the survey methodology for the Current Population Survey (CPS) was changed and weights were adjusted; see *Supplemental Note 1* for more information. Enrollment estimates exclude the following: children ages 3–5 enrolled in elementary school or higher; children ages 6–17 enrolled in prekindergarten, kindergarten, or postsecondary; and adults ages 18–34 enrolled in school below the higher education level.

SOURCE: U.S. Department of Commerce, Bureau of the Census. October Current Population Surveys, 1970–98.

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# Educational Enrollment Rates, by Age

Table 1-2 Total population (in thousands) of people ages 3–34, by age and enrollment status: October 1970–98

| | Prekindergarten and kindergarten 3- to 5-year-olds | | Elementary and secondary 6- to 17-year-olds | | Postsecondary 18- to 24-year-olds | | Postsecondary 25- to 34-year-olds | |
|---|---|---|---|---|---|---|---|---|
| October | Enrolled | Not Enrolled | Enrolled | Not Enrolled | Enrolled | Not Enrolled | Enrolled | Not Enrolled |
| 1970 | 4,104 | 6,845 | 47,973 | 919 | 5,804 | 16,748 | 1,349 | 23,254 |
| 1971 | 4,148 | 6,462 | 48,017 | 903 | 6,211 | 17,459 | 1,593 | 23,925 |
| 1972 | 4,231 | 5,935 | 46,922 | 1,084 | 6,258 | 18,321 | 1,760 | 25,074 |
| 1973 | 4,234 | 6,110 | 46,233 | 1,180 | 6,055 | 19,181 | 1,829 | 26,283 |
| 1974 | 4,699 | 5,693 | 45,922 | 1,190 | 6,316 | 19,354 | 2,202 | 27,013 |
| 1975 | 4,955 | 5,230 | 45,428 | 1,075 | 6,936 | 19,451 | 2,469 | 27,901 |
| 1976 | 4,790 | 4,936 | 44,856 | 1,037 | 7,181 | 19,738 | 2,488 | 28,956 |
| 1977 | 4,579 | 4,674 | 44,248 | 1,036 | 7,142 | 20,189 | 2,801 | 29,637 |
| 1978 | 4,584 | 4,528 | 43,385 | 1,044 | 6,994 | 20,653 | 2,569 | 30,711 |
| 1979 | 4,664 | 4,455 | 42,385 | 1,038 | 6,991 | 20,983 | 2,676 | 31,713 |
| 1980 | 4,878 | 4,406 | 41,354 | 1,048 | 7,227 | 20,903 | 2,703 | 32,915 |
| 1981 | 4,936 | 4,710 | 41,702 | 943 | 7,574 | 21,391 | 2,928 | 35,118 |
| 1982 | 5,105 | 4,768 | 40,952 | 830 | 7,677 | 21,169 | 2,988 | 35,696 |
| 1983 | 5,385 | 4,868 | 40,482 | 743 | 7,477 | 21,103 | 3,087 | 36,269 |
| 1984 | 5,480 | 5,131 | 40,012 | 858 | 7,592 | 20,439 | 3,014 | 37,213 |
| 1985 | 5,865 | 4,868 | 40,413 | 801 | 7,538 | 19,584 | 3,063 | 37,868 |
| 1986 | 5,971 | 4,898 | 40,635 | 770 | 7,397 | 19,115 | 2,991 | 38,909 |
| 1987 | 5,931 | 4,941 | 40,629 | 866 | 7,694 | 18,256 | 2,985 | 39,389 |
| 1988 | 5,978 | 5,015 | 40,725 | 778 | 7,791 | 17,942 | 2,963 | 39,724 |
| 1989 | 6,026 | 5,013 | 40,831 | 797 | 7,803 | 17,458 | 3,082 | 39,767 |
| 1990 | (*) | (*) | 41,339 | 654 | 7,964 | 16,888 | 3,162 | 39,465 |
| 1991 | 6,334 | 5,036 | 41,940 | 639 | 8,171 | 16,401 | 3,285 | 38,969 |
| 1992 | 6,402 | 5,142 | 42,611 | 669 | 8,342 | 15,936 | 3,125 | 38,536 |
| 1993 | 6,581 | 5,373 | 43,217 | 656 | 8,193 | 15,907 | 3,094 | 38,005 |
| 1994 | 7,514 | 4,814 | 45,091 | 745 | 8,729 | 16,525 | 3,419 | 37,698 |
| 1995 | 7,739 | 4,778 | 45,587 | 936 | 8,539 | 16,361 | 3,349 | 37,299 |
| 1996 | 7,580 | 4,798 | 45,817 | 1,495 | 8,768 | 15,902 | 3,443 | 36,648 |
| 1997 | 7,860 | 4,260 | 46,937 | 856 | 9,199 | 15,769 | 3,270 | 36,007 |
| 1998 | 7,788 | 4,291 | 47,038 | 1,014 | 9,322 | 16,184 | 3,414 | 35,188 |

* Comparable data were not available for children ages 3 and 4 due to changes in survey procedures; see *Supplemental Note 1* for more information.

NOTE: Prekindergarten and kindergarten includes nursery schools. "Higher education institutions" includes regular programs in 2- and 4-year colleges and universities only. In 1994, the survey methodology for the Current Population Survey (CPS) was changed and weights were adjusted; see *Supplemental Note 1* for more information. Enrollment estimates exclude the following: children ages 3–5 enrolled in elementary school or higher, children ages 6–17 enrolled in prekindergarten, kindergarten, or postsecondary; and adults ages 18–34 enrolled in school below the higher education level. These groups are included in the estimates for "not enrolled."

SOURCE: U.S. Department of Commerce, Bureau of the Census. October Current Population Surveys, 1970–98.

# Enrollment in Preprimary Education

**Table 2-1** **Percentage of 3-, 4-, and 5-year-olds enrolled in center-based programs or kindergarten, by student characteristics: 1991, 1993, 1995, 1996, and 1999**

| | 3-year-olds | | | | | 4-year-olds | | | | | 5-year-olds | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Student characteristic** | **1991** | **1993** | **1995** | **1996** | **1999** | **1991** | **1993** | **1995** | **1996** | **1999** | **1991** | **1993** | **1995** | **1996** | **1999** |
| **Total** | **42.6** | **40.6** | **41.0** | **42.6** | **45.9** | **61.7** | **63.1** | **65.4** | **64.4** | **70.1** | **89.8** | **91.1** | **93.2** | **92.3** | **93.4** |
| Race-ethnicity | | | | | | | | | | | | | | | |
| White | 44.8 | 40.8 | 44.0 | 44.6 | 46.7 | 61.4 | 63.6 | 65.8 | 65.3 | 69.3 | 89.5 | 90.7 | 92.6 | 91.8 | 92.9 |
| Black | 45.4 | 47.1 | 44.6 | 49.8 | 59.6 | 71.7 | 68.5 | 72.9 | 79.3 | 81.4 | 94.0 | 93.2 | 94.5 | 95.5 | 98.5 |
| Hispanic | 24.9 | 32.8 | 22.4 | 28.4 | 25.6 | 51.5 | 50.7 | 50.1 | 48.8 | 63.6 | 86.2 | 90.7 | 93.2 | 90.1 | 88.6 |
| Other | [1]43.8 | [1]35.7 | [1]32.9 | [1]39.5 | [1]58.2 | [1]62.3 | [1]72.6 | [1]71.6 | [1]51.0 | [1]70.0 | [1]90.6 | 90.2 | 98.4 | 95.6 | 97.8 |
| Household income | | | | | | | | | | | | | | | |
| $10,000 or less | (2) | 35.3 | 31.7 | 30.5 | 44.0 | (2) | 56.8 | 61.5 | 58.7 | 66.1 | (2) | 91.1 | 94.5 | 91.4 | 95.3 |
| 10,001–20,000 | (2) | 27.3 | 31.6 | 40.1 | 38.5 | (2) | 54.7 | 57.0 | 57.0 | 61.3 | (2) | 89.8 | 90.7 | 90.4 | 88.8 |
| 20,001–35,000 | (2) | 30.6 | 32.7 | 34.9 | 35.9 | (2) | 54.9 | 52.9 | 55.4 | 65.7 | (2) | 86.3 | 92.2 | 91.3 | 93.7 |
| 35,001–50,000 | (2) | 46.5 | 40.7 | 47.4 | 44.7 | (2) | 68.6 | 63.5 | 65.8 | 69.0 | (2) | 92.7 | 89.1 | 91.6 | 91.1 |
| 50,001 or more | (2) | 64.6 | 62.1 | 60.3 | 57.6 | (2) | 82.4 | 84.5 | 80.9 | 79.3 | (2) | 97.1 | 97.3 | 95.2 | 95.5 |
| Parents' highest education level | | | | | | | | | | | | | | | |
| Less than high school diploma | 23.3 | 16.1 | 19.9 | [1]27.1 | [1]28.8 | 37.6 | 46.5 | [1]44.9 | [1]54.6 | 55.3 | 86.9 | 79.6 | 93.8 | 87.7 | 92.8 |
| High school diploma or GED | 32.5 | 29.3 | 29.3 | 34.8 | 34.5 | 51.9 | 51.5 | 56.7 | 54.2 | 62.8 | 87.8 | 89.3 | 91.7 | 92.6 | 92.0 |
| Some college/vocational/technical | 44.5 | 42.9 | 40.6 | 42.0 | 45.4 | 64.1 | 68.6 | 65.6 | 66.5 | 69.1 | 91.3 | 92.6 | 92.3 | 91.5 | 93.2 |
| Bachelor's degree | 53.8 | 52.9 | 55.1 | 55.2 | 59.3 | 77.0 | 74.8 | 76.6 | 70.1 | 76.7 | 91.3 | 95.7 | 96.2 | 94.3 | 93.4 |
| Graduate/professional school | 66.1 | 66.4 | [1]62.6 | 62.1 | 61.1 | 81.1 | 80.1 | 83.3 | 83.3 | 84.9 | 92.4 | 96.0 | 94.8 | 94.7 | 96.3 |

[1] Interpret with caution; standard errors are large due to small sample sizes.

[2] Family income data for 1991 are not comparable with data for 1993, 1995, 1996, and 1999.

NOTE: This analysis includes children ages 3–5 who were not enrolled in first grade. Age is as of December 31 of the prior year. See *Supplemental Note 2* for information on the National Household Education Survey (NHES). See *Supplemental Note 3* for information on racial-ethnic categories. See the glossary for definitions of center-based programs and kindergarten.

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1991 (Early Childhood Education Component), 1993 (School Readiness Component), 1995 (Early Childhood Program Participation Component), 1996 (Parent and Family Involvement in Education Component), and 1999 (Parent Interview Component).

# Enrollment in Preprimary Education

**Table 2-2** **Percentage of 3-, 4-, and 5-year-olds enrolled in center-based programs, kindergarten, or center-based programs and kindergarten, by selected student characteristics: 1999**

| Student characteristic | 3-year-olds | | | | 4-year-olds | | | | 5-year-olds | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Center-based programs | Kindergarten | Center-based and kindergarten[1] | Total | Center-based programs | Kindergarten | Center-based and kindergarten[1] | Total | Center-based programs | Kindergarten | Center-based and kindergarten[1] |
| **Total** | **45.9** | **45.2** | **—** | **—** | **70.1** | **66.4** | **2.6** | **1.2** | **93.4** | **21.1** | **57.0** | **15.3** |
| Sex | | | | | | | | | | | | |
| Male | 47.8 | 47.2 | — | — | 70.7 | 67.3 | 2.4 | 1.0 | 93.7 | 23.2 | 56.5 | 13.9 |
| Female | 43.8 | 43.0 | — | — | 69.6 | 65.5 | 2.8 | 1.4 | 93.1 | 18.8 | 57.5 | 16.8 |
| Race-ethnicity | | | | | | | | | | | | |
| White | 46.7 | 46.0 | — | — | 69.3 | 66.2 | 1.8 | 1.4 | 92.9 | 23.1 | 54.7 | 15.1 |
| Black | 59.6 | 59.2 | — | — | 81.4 | 79.4 | 1.3 | 0.7 | 98.5 | 20.2 | 55.2 | 23.2 |
| Hispanic | 25.6 | 25.0 | — | — | 63.6 | 56.8 | 5.8 | 1.1 | 88.6 | 13.4 | 66.2 | 9.0 |
| Other | [2]58.2 | [2]56.3 | — | — | [2]70.0 | [2]65.0 | 4.5 | 0.6 | 97.8 | [2]23.4 | [2]61.1 | 13.3 |
| Household income | | | | | | | | | | | | |
| $10,000 or less | 44.0 | 43.6 | — | — | 66.1 | 62.1 | 2.6 | 1.3 | 95.3 | 22.0 | [3]55.6 | 17.8 |
| 10,001–20,000 | 38.5 | 38.0 | — | — | 61.3 | 57.6 | 3.2 | 0.4 | 88.8 | 20.1 | 59.2 | 9.5 |
| 20,001–30,000 | 35.9 | 35.3 | — | — | 65.7 | 63.6 | 1.7 | 0.4 | 93.7 | 16.1 | 61.4 | 16.2 |
| 30,001–50,000 | 44.7 | 44.1 | — | — | 69.0 | 65.3 | 2.2 | 1.5 | 91.1 | 20.1 | 59.0 | 12.0 |
| 50,001 or more | 57.6 | 56.6 | — | — | 79.3 | 74.4 | 3.1 | 1.8 | 95.5 | 24.5 | 53.1 | 17.9 |
| Parents' highest education level | | | | | | | | | | | | |
| Less than high school diploma | [2]28.8 | [2]27.9 | — | — | 55.3 | [2]50.9 | 2.3 | 2.1 | 92.8 | 14.6 | [2]71.8 | 6.4 |
| High school diploma or GED | 34.5 | 33.7 | — | — | 62.8 | 59.5 | 3.0 | 0.3 | 92.0 | 18.0 | 58.9 | 15.1 |
| Some college/vocational/technical | 45.4 | 44.8 | — | — | 69.1 | 65.6 | 1.9 | 1.5 | 93.2 | 21.5 | 56.7 | 15.0 |
| Bachelor's degree | 59.3 | 58.9 | — | — | 76.7 | 73.4 | 2.3 | 1.0 | 93.4 | 26.8 | 51.7 | 14.9 |
| Graduate/professional school | 61.1 | 60.1 | — | — | 84.9 | 79.6 | 3.7 | 1.6 | 96.3 | 22.6 | 53.5 | 20.2 |
| Poverty status[3] | | | | | | | | | | | | |
| Poor | 39.1 | 38.7 | — | — | 63.5 | 58.7 | 3.8 | 1.0 | 91.7 | 19.4 | 59.6 | 12.8 |
| Nonpoor | 48.2 | 47.4 | — | — | 72.2 | 68.7 | 2.2 | 1.2 | 93.9 | 21.6 | 56.2 | 16.1 |
| Poverty status[3] within race-ethnicity | | | | | | | | | | | | |
| White | | | | | | | | | | | | |
| Poor | [2]31.7 | [2]31.7 | — | — | [2]48.7 | [2]46.8 | 0.8 | 1.0 | 89.8 | 24.6 | [2]51.6 | 13.6 |
| Nonpoor | 49.3 | 48.6 | — | — | 72.2 | 68.9 | 1.9 | 1.4 | 93.4 | 22.9 | 55.2 | 15.4 |
| Black | | | | | | | | | | | | |
| Poor | [2]59.7 | [2]58.8 | — | — | 83.9 | [2]82.7 | 1.2 | 0 | 99.2 | [2]18.6 | [2]59.0 | [2]21.5 |
| Nonpoor | 59.6 | 56.6 | — | — | [2]79.3 | 76.6 | 1.3 | 1.4 | 98.1 | 21.5 | 52.1 | 24.4 |
| Hispanic | | | | | | | | | | | | |
| Poor | [2]26.6 | [2]26.2 | — | — | [2]60.5 | [2]50.7 | 7.7 | 2.1 | [2]84.8 | 12.5 | 68.0 | 4.3 |
| Nonpoor | 24.7 | 23.9 | — | — | 66.1 | 61.5 | 4.3 | 0.3 | 91.3 | 14.0 | 65.0 | 12.3 |

— Sample size too small for a reliable estimate.

[1] Due to survey format, dual enrollment may be underestimated; see *Supplemental Note 2* for more information.

[2] Interpret with caution; standard errors are large due to small sample size.

[3] The poverty measure combines information about household income and household size. See *Supplemental Note 2* for more information.

NOTE: This analysis includes children ages 3–5 who were not enrolled in first grade. Age is as of December 31 of the prior year. Details may not add to totals due to rounding. See *Supplemental Note 2* for information on the National Household Education Survey (NHES). See *Supplemental Note 3* for information on racial-ethnic categories. See the glossary for definitions of center-based programs and kindergarten.

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Parent Interview Component).

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# Past and Projected Elementary and Secondary School Enrollment

**Table 3-1** **Public elementary and secondary school enrollment in grades 1–12 (in thousands), by grade level, with projections: Fall 1965–2009**

| Fall of year | Total | Grades 1–8 | Grades 9–12 |
|---|---|---|---|
| 1965 | 39,816 | 28,206 | 11,610 |
| 1970 | 43,330 | 29,995 | 13,336 |
| 1975 | 41,848 | 27,544 | 14,304 |
| 1980 | 38,188 | 24,957 | 13,231 |
| 1981 | 37,357 | 24,593 | 12,764 |
| 1982 | 36,720 | 24,315 | 12,405 |
| 1983 | 36,394 | 24,122 | 12,271 |
| 1984 | 36,199 | 23,895 | 12,304 |
| 1985 | 36,230 | 23,842 | 12,388 |
| 1986 | 36,443 | 24,110 | 12,333 |
| 1987 | 36,620 | 24,544 | 12,076 |
| 1988 | 36,756 | 25,068 | 11,687 |
| 1989 | 37,056 | 25,666 | 11,390 |
| 1990 | 37,605 | 26,267 | 11,338 |
| 1991 | 38,359 | 26,818 | 11,541 |
| 1992 | 39,006 | 27,271 | 11,735 |
| 1993 | 39,542 | 27,581 | 11,961 |
| 1994 | 40,064 | 27,851 | 12,213 |
| 1995 | 40,667 | 28,167 | 12,500 |
| 1996 | 41,408 | 28,562 | 12,847 |
| 1997 | 41,929 | 28,875 | 13,054 |
| | | **Projected** | |
| 1998 | 42,742 | 29,412 | 13,330 |
| 1999 | 43,191 | 29,648 | 13,543 |
| 2000 | 43,503 | 29,845 | 13,658 |
| 2001 | 43,777 | 30,010 | 13,767 |
| 2002 | 44,018 | 30,083 | 13,935 |
| 2003 | 44,173 | 30,054 | 14,119 |
| 2004 | 44,307 | 29,931 | 14,376 |
| 2005 | 44,411 | 29,742 | 14,669 |
| 2006 | 44,434 | 29,566 | 14,868 |
| 2007 | 44,367 | 29,460 | 14,907 |
| 2008 | 44,241 | 29,408 | 14,833 |
| 2009 | 44,088 | 29,389 | 14,699 |

NOTE: Details may not add to totals due to rounding.

SOURCE: U.S. Department of Education, NCES. Common Core of Data, various years, and *Projections of Education Statistics to 2009* (NCES 1999–038), 1999.

# Past and Projected Elementary and Secondary School Enrollment

**Table 3-2** **Public elementary and secondary school enrollment in grades 1–12 (in thousands), by region, with projections: Fall 1965–2009**

| | | Region | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Northeast | | Midwest | | South | | West | |
| Fall of year | Total | Total | Percent | Total | Percent | Total | Percent | Total | Percent |
| 1965 | 39,816 | 8,155 | 20.5 | 10,907 | 27.4 | 13,701 | 34.4 | 7,045 | 17.7 |
| 1970 | 43,330 | 9,136 | 21.1 | 11,950 | 27.6 | 14,416 | 33.3 | 7,829 | 18.1 |
| 1975 | 41,848 | 8,994 | 21.5 | 11,360 | 27.1 | 13,872 | 33.1 | 7,622 | 18.2 |
| 1980 | 38,188 | 7,711 | 20.2 | 9,929 | 26.0 | 13,259 | 34.7 | 7,289 | 19.1 |
| 1985 | 36,230 | 6,772 | 18.7 | 9,019 | 24.9 | 12,994 | 35.9 | 7,445 | 20.5 |
| 1990 | 37,605 | 6,662 | 17.7 | 9,061 | 24.1 | 13,478 | 35.8 | 8,406 | 22.4 |
| 1991 | 38,359 | 6,774 | 17.7 | 9,176 | 23.9 | 13,724 | 35.8 | 8,687 | 22.6 |
| 1992 | 39,006 | 6,881 | 17.6 | 9,301 | 23.8 | 13,940 | 35.7 | 8,884 | 22.8 |
| 1993 | 39,542 | 6,993 | 17.7 | 9,374 | 23.7 | 14,126 | 35.7 | 9,049 | 22.9 |
| 1994 | 40,064 | 7,086 | 17.7 | 9,461 | 23.6 | 14,312 | 35.7 | 9,206 | 23.0 |
| 1995 | 40,667 | 7,210 | 17.7 | 9,560 | 23.5 | 14,529 | 35.7 | 9,369 | 23.0 |
| 1996 | 41,408 | 7,332 | 17.7 | 9,675 | 23.4 | 14,762 | 35.6 | 9,640 | 23.3 |
| 1997 | 41,929 | 7,421 | 17.7 | 9,738 | 23.2 | 14,947 | 35.6 | 9,822 | 23.4 |
| | | | | | Projected | | | | |
| 1998 | 42,742 | 7,516 | 17.6 | 9,882 | 23.1 | 15,246 | 35.7 | 10,101 | 23.6 |
| 1999 | 43,191 | 7,572 | 17.5 | 9,927 | 23.0 | 15,426 | 35.7 | 10,267 | 23.8 |
| 2000 | 43,503 | 7,598 | 17.5 | 9,948 | 22.9 | 15,561 | 35.8 | 10,394 | 23.9 |
| 2001 | 43,777 | 7,619 | 17.4 | 9,970 | 22.8 | 15,682 | 35.8 | 10,505 | 24.0 |
| 2002 | 44,018 | 7,641 | 17.4 | 9,989 | 22.7 | 15,773 | 35.8 | 10,615 | 24.1 |
| 2003 | 44,173 | 7,643 | 17.3 | 9,975 | 22.6 | 15,842 | 35.9 | 10,713 | 24.3 |
| 2004 | 44,307 | 7,631 | 17.2 | 9,967 | 22.5 | 15,902 | 35.9 | 10,809 | 24.4 |
| 2005 | 44,411 | 7,606 | 17.1 | 9,954 | 22.4 | 15,949 | 35.9 | 10,903 | 24.6 |
| 2006 | 44,434 | 7,560 | 17.0 | 9,929 | 22.3 | 15,969 | 35.9 | 10,976 | 24.7 |
| 2007 | 44,367 | 7,497 | 16.9 | 9,886 | 22.3 | 15,953 | 36.0 | 11,031 | 24.9 |
| 2008 | 44,241 | 7,427 | 16.8 | 9,829 | 22.2 | 15,923 | 36.0 | 11,063 | 25.0 |
| 2009 | 44,088 | 7,358 | 16.7 | 9,786 | 22.2 | 15,871 | 36.0 | 11,075 | 25.1 |

NOTE: Details may not add to totals due to rounding. See *Supplemental Note 4* for a list of states that comprise each region.

SOURCE: U.S. Department of Education, NCES. Common Core of Data, various years, and *Projections of Education Statistics to 2009* (NCES 1999–038), 1999.

# Past and Projected Elementary and Secondary School Enrollment

**Table 3-3** **Private elementary and secondary school enrollment (in thousands), by region and grade level: School years 1989–90 to 1997–98**

| School year | Total | Region | | | |
|---|---|---|---|---|---|
| | | Northeast | Midwest | South | West |
| | | | **Grades 1–12** | | |
| 1989–90 | 4,265 | 1,199 | 1,221 | 1,109 | 736 |
| 1991–92 | 4,323 | 1,168 | 1,213 | 1,145 | 798 |
| 1993–94 | 4,264 | 1,120 | 1,172 | 1,214 | 759 |
| 1995–96 | 4,400 | 1,124 | 1,196 | 1,256 | 825 |
| 1997–98 | 4,461 | 1,123 | 1,199 | 1,323 | 816 |
| | | | **Grades 1–8** | | |
| 1989–90 | 3,139 | 837 | 933 | 818 | 551 |
| 1991–92 | 3,197 | 822 | 937 | 843 | 595 |
| 1993–94 | 3,162 | 792 | 899 | 899 | 573 |
| 1995–96 | 3,240 | 789 | 910 | 926 | 616 |
| 1997–98 | 3,280 | 794 | 907 | 969 | 610 |
| | | | **Grades 9–12** | | |
| 1989–90 | 1,126 | 362 | 288 | 291 | 185 |
| 1991–92 | 1,126 | 346 | 276 | 302 | 203 |
| 1993–94 | 1,102 | 328 | 273 | 315 | 186 |
| 1995–96 | 1,160 | 334 | 286 | 330 | 209 |
| 1997–98 | 1,181 | 330 | 292 | 353 | 206 |

NOTE: Estimates exclude ungraded students. Details may not add to totals due to rounding. See *Supplemental Note 4* for a list of states that comprise each region.

SOURCE: U.S. Department of Education, NCES. Private School Surveys (PSS), various years.

# Racial-Ethnic Distribution of Public School Students

**Table 4-1** **Racial-ethnic distribution of public school students enrolled in grades 1–12: October 1972–98**

| | | Minority enrollment | | | |
|---|---|---|---|---|---|
| October | White | Total | Black | Hispanic | Other |
| 1972 | 78.0 | 22.0 | 14.8 | 5.8 | 1.4 |
| 1973 | 78.1 | 21.9 | 14.7 | 5.7 | 1.4 |
| 1974 | 76.8 | 23.2 | 15.4 | 6.2 | 1.5 |
| 1975 | 76.3 | 23.7 | 15.5 | 6.6 | 1.7 |
| 1976 | 76.4 | 23.6 | 15.5 | 6.4 | 1.7 |
| 1977 | 76.3 | 23.7 | 15.8 | 6.2 | 1.8 |
| 1978 | 75.6 | 24.4 | 15.9 | 6.4 | 2.0 |
| 1979 | — | — | — | — | — |
| 1980 | — | — | — | — | — |
| 1981 | 72.5 | 27.5 | 16.0 | 8.6 | 2.9 |
| 1982 | 72.1 | 27.9 | 16.0 | 8.7 | 3.2 |
| 1983 | 71.4 | 28.6 | 16.1 | 9.1 | 3.4 |
| 1984 | 71.9 | 28.1 | 16.0 | 8.5 | 3.6 |
| 1985 | 69.7 | 30.3 | 16.7 | 10.1 | 3.5 |
| 1986 | 69.3 | 30.7 | 16.5 | 10.6 | 3.6 |
| 1987 | 68.8 | 31.2 | 16.4 | 10.8 | 3.9 |
| 1988 | 68.4 | 31.6 | 16.6 | 10.9 | 4.2 |
| 1989 | 68.0 | 32.0 | 16.6 | 11.4 | 4.1 |
| 1990 | 67.7 | 32.3 | 16.4 | 11.6 | 4.3 |
| 1991 | 67.4 | 32.6 | 16.8 | 11.6 | 4.2 |
| 1992 | 67.0 | 33.0 | 16.8 | 11.9 | 4.3 |
| 1993 | 67.2 | 32.8 | 16.5 | 12.0 | 4.3 |
| 1994 | 66.0 | 34.0 | 16.6 | 13.5 | 3.8 |
| 1995 | 65.5 | 34.5 | 16.9 | 14.1 | 3.5 |
| 1996 | 63.8 | 36.2 | 16.6 | 14.4 | 5.2 |
| 1997 | 63.2 | 36.8 | 16.9 | 14.7 | 5.2 |
| 1998 | 62.7 | 37.3 | 17.1 | 15.1 | 5.1 |

— Not available.

NOTE: In 1994, the survey methodology for the Current Population Survey (CPS) was changed and weights were adjusted; see *Supplemental Note 1* for more information. Percentages may not add to 100.0 due to rounding. See *Supplemental Note 3* for information on the racial-ethnic categories.

SOURCE: U.S. Department of Commerce, Bureau of the Census. October Current Population Surveys, 1972–98.

# Racial-Ethnic Distribution of Public School Students

Table 4-2 Racial-ethnic distribution of public school students enrolled in grades 1–12, by region: October 1972–98

| October | White | Minority | | | | White | Minority | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | Black | Hispanic | Other | | Total | Black | Hispanic | Other |
| | | | Northeast | | | | | Midwest | | |
| 1972 | 81.6 | 18.4 | 12.3 | 5.4 | 0.7 | 87.6 | 12.4 | 10.6 | 1.5 | 0.3 |
| 1973 | 81.3 | 18.7 | 12.6 | 5.4 | 0.6 | 87.9 | 12.1 | 10.5 | 1.1 | 0.5 |
| 1974 | 81.0 | 19.0 | 12.7 | 5.5 | 0.7 | 86.5 | 13.5 | 11.2 | 1.6 | 0.7 |
| 1975 | 79.9 | 20.1 | 13.4 | 6.0 | 0.7 | 86.2 | 13.8 | 11.7 | 1.6 | 0.5 |
| 1976 | 79.1 | 20.9 | 12.9 | 6.3 | 1.7 | 87.0 | 13.0 | 11.2 | 1.5 | 0.4 |
| 1977 | 80.2 | 19.8 | 12.7 | 5.8 | 1.3 | 85.9 | 14.1 | 11.7 | 1.6 | 0.7 |
| 1978 | 79.9 | 20.1 | 13.6 | 5.7 | 0.8 | 85.7 | 14.3 | 11.3 | 1.8 | 1.1 |
| 1979 | — | — | — | — | — | — | — | — | — | — |
| 1980 | — | — | — | — | — | — | — | — | — | — |
| 1981 | 76.3 | 23.7 | 13.4 | 8.3 | 2.0 | 84.3 | 15.7 | 12.2 | 1.8 | 1.6 |
| 1982 | 75.9 | 24.1 | 13.5 | 8.3 | 2.3 | 84.5 | 15.5 | 12.0 | 1.8 | 1.7 |
| 1983 | 76.2 | 23.8 | 14.0 | 7.8 | 1.9 | 83.4 | 16.6 | 12.6 | 2.1 | 1.9 |
| 1984 | 76.8 | 23.2 | 13.3 | 7.1 | 2.8 | 82.2 | 17.8 | 13.7 | 2.3 | 1.8 |
| 1985 | 74.2 | 25.8 | 13.3 | 10.4 | 2.1 | 79.5 | 20.5 | 15.0 | 3.3 | 2.2 |
| 1986 | 74.2 | 25.8 | 13.3 | 10.4 | 2.1 | 81.9 | 18.1 | 13.0 | 3.3 | 1.8 |
| 1987 | 74.8 | 25.2 | 12.9 | 9.3 | 3.0 | 80.9 | 19.1 | 13.6 | 3.1 | 2.5 |
| 1988 | 74.5 | 25.5 | 13.9 | 8.7 | 2.9 | 79.5 | 20.5 | 15.0 | 3.3 | 2.2 |
| 1989 | 73.3 | 26.7 | 14.5 | 9.2 | 3.1 | 80.4 | 19.6 | 13.9 | 3.4 | 2.3 |
| 1990 | 73.2 | 26.8 | 13.5 | 10.2 | 3.2 | 81.9 | 18.1 | 12.9 | 2.6 | 2.6 |
| 1991 | 72.9 | 27.1 | 14.2 | 9.7 | 3.3 | 82.0 | 18.0 | 12.7 | 2.8 | 2.5 |
| 1992 | 71.9 | 28.1 | 14.8 | 9.8 | 3.6 | 82.0 | 18.0 | 12.8 | 2.7 | 2.5 |
| 1993 | 72.1 | 27.9 | 15.4 | 8.7 | 3.7 | 81.1 | 18.9 | 13.2 | 3.5 | 2.2 |
| 1994 | 72.1 | 27.9 | 13.9 | 10.8 | 3.2 | 78.2 | 21.8 | 14.8 | 4.8 | 2.3 |
| 1995 | 70.7 | 29.3 | 14.6 | 11.8 | 3.0 | 79.5 | 20.5 | 13.9 | 4.4 | 2.2 |
| 1996 | 68.2 | 31.8 | 16.1 | 12.0 | 3.7 | 80.4 | 19.6 | 12.7 | 4.1 | 2.8 |
| 1997 | 67.7 | 32.3 | 16.0 | 12.3 | 4.0 | 79.5 | 20.5 | 13.3 | 4.3 | 2.9 |
| 1998 | 68.2 | 31.8 | 15.1 | 13.0 | 3.7 | 78.8 | 21.2 | 13.3 | 4.7 | 3.2 |

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# Racial-Ethnic Distribution of Public School Students

**Table 4-2 Racial-ethnic distribution of public school students enrolled in grades 1–12, by region: October 1972–98—Continued**

| October | White | Minority | | | | White | Minority | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | Black | Hispanic | Other | | Total | Black | Hispanic | Other |
| | South | | | | | West | | | | |
| 1972 | 70.1 | 29.9 | 24.5 | 4.8 | 0.5 | 73.1 | 26.9 | 6.3 | 15.0 | 5.6 |
| 1973 | 69.8 | 30.2 | 24.7 | 5.0 | 0.6 | 74.3 | 25.7 | 6.2 | 14.3 | 5.2 |
| 1974 | 68.1 | 31.9 | 25.5 | 5.9 | 0.5 | 72.9 | 27.1 | 6.8 | 14.7 | 5.6 |
| 1975 | 67.6 | 32.4 | 25.2 | 6.4 | 0.7 | 72.1 | 27.9 | 6.9 | 14.8 | 6.2 |
| 1976 | 67.6 | 32.4 | 25.5 | 6.0 | 0.9 | 73.0 | 27.0 | 7.0 | 14.6 | 5.4 |
| 1977 | 67.9 | 32.1 | 26.1 | 5.5 | 0.6 | 72.4 | 27.6 | 6.8 | 14.5 | 6.3 |
| 1978 | 66.7 | 33.3 | 26.1 | 6.1 | 1.1 | 71.8 | 28.2 | 6.9 | 14.9 | 6.5 |
| 1979 | — | — | — | — | — | — | — | — | — | — |
| 1980 | — | — | — | — | — | — | — | — | — | — |
| 1981 | 64.3 | 35.7 | 25.8 | 7.0 | 1.4 | 67.3 | 32.7 | 6.7 | 17.9 | 8.2 |
| 1982 | 64.7 | 35.3 | 26.6 | 7.7 | 1.0 | 65.2 | 34.8 | 5.5 | 19.7 | 9.6 |
| 1983 | 64.3 | 35.7 | 25.8 | 8.5 | 1.5 | 64.1 | 35.9 | 5.6 | 20.1 | 10.2 |
| 1984 | 66.5 | 33.5 | 24.3 | 7.5 | 1.7 | 63.8 | 36.2 | 6.8 | 19.4 | 9.9 |
| 1985 | 63.7 | 36.3 | 25.6 | 8.8 | 2.0 | 63.6 | 36.4 | 6.5 | 20.8 | 9.1 |
| 1986 | 62.5 | 37.5 | 26.4 | 8.9 | 2.2 | 62.9 | 37.1 | 6.1 | 21.7 | 9.3 |
| 1987 | 62.4 | 37.6 | 25.8 | 9.6 | 2.2 | 60.3 | 39.7 | 7.1 | 23.1 | 9.5 |
| 1988 | 62.4 | 37.6 | 24.8 | 10.4 | 2.4 | 60.9 | 39.1 | 6.7 | 22.0 | 10.4 |
| 1989 | 61.9 | 38.1 | 25.8 | 9.8 | 2.5 | 59.4 | 40.6 | 5.9 | 24.9 | 9.8 |
| 1990 | 60.0 | 40.0 | 27.3 | 10.5 | 2.2 | 59.3 | 40.7 | 5.4 | 24.8 | 10.5 |
| 1991 | 59.7 | 40.3 | 27.7 | 10.1 | 2.5 | 59.4 | 40.6 | 5.9 | 25.0 | 9.6 |
| 1992 | 59.7 | 40.3 | 27.2 | 10.3 | 2.8 | 58.8 | 41.2 | 5.8 | 26.2 | 9.2 |
| 1993 | 60.6 | 39.4 | 26.2 | 10.4 | 2.8 | 58.9 | 41.1 | 6.1 | 26.0 | 9.1 |
| 1994 | 59.3 | 40.7 | 26.0 | 12.4 | 2.3 | 59.1 | 40.9 | 5.6 | 26.7 | 8.5 |
| 1995 | 59.1 | 40.9 | 26.9 | 12.1 | 1.9 | 57.1 | 42.9 | 5.5 | 29.4 | 8.0 |
| 1996 | 57.6 | 42.4 | 27.0 | 12.6 | 2.7 | 52.8 | 47.2 | 5.3 | 29.3 | 12.7 |
| 1997 | 57.1 | 42.9 | 27.0 | 13.4 | 2.6 | 52.8 | 47.2 | 6.5 | 28.6 | 12.1 |
| 1998 | 56.4 | 43.6 | 27.9 | 12.8 | 2.8 | 52.0 | 48.0 | 6.8 | 30.0 | 11.3 |

— Not available.

NOTE: In 1994, the survey methodology for the Current Population Survey (CPS) was changed and weights were adjusted; see *Supplemental Note 1* for more information. Percentages may not add to 100.0 due to rounding. See *Supplemental Note 3* for information on the racial-ethnic categories. See *Supplemental Note 4* for a list of states that comprise each region.

SOURCE: U.S. Department of Commerce, Bureau of the Census. October Current Population Surveys, 1972–98.

# Parental Education, by Race-Ethnicity

**Table 5-1** **Percentage distribution of 6- to 18-year-olds according to parents' highest education level, by child's race-ethnicity: 1974–99**

| Parents' highest education level and child's race-ethnicity | 1974 | 1979 | 1984 | 1989 | 1994 | 1999 |
|---|---|---|---|---|---|---|
| | | | **White** | | | |
| Mother's highest education level | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Less than high school diploma | 27.1 | 22.1 | 16.8 | 12.0 | 9.5 | 6.9 |
| High school diploma or GED | 51.4 | 50.4 | 50.3 | 48.8 | 37.9 | 35.2 |
| Some college | 12.2 | 16.1 | 18.3 | 21.3 | 31.0 | 31.4 |
| Bachelor's degree or higher | 9.3 | 11.4 | 14.6 | 17.9 | 21.6 | 26.4 |
| Father's highest education level | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Less than high school diploma | 28.6 | 22.4 | 16.2 | 12.2 | 9.1 | 8.1 |
| High school diploma or GED | 38.3 | 38.7 | 39.0 | 38.4 | 32.2 | 31.5 |
| Some college | 13.2 | 15.5 | 18.3 | 20.1 | 27.4 | 26.8 |
| Bachelor's degree or higher | 19.9 | 23.4 | 26.5 | 29.3 | 31.3 | 33.6 |
| | | | **Black** | | | |
| Mother's highest education level | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Less than high school diploma | 57.6 | 46.4 | 34.8 | 26.3 | 20.0 | 19.6 |
| High school diploma or GED | 32.1 | 36.1 | 42.6 | 44.4 | 40.0 | 37.1 |
| Some college | 6.8 | 12.5 | 15.6 | 19.8 | 30.0 | 29.5 |
| Bachelor's degree or higher | 3.6 | 4.9 | 7.0 | 9.4 | 10.1 | 13.9 |
| Father's highest education level | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Less than high school diploma | 61.3 | 44.3 | 33.1 | 25.4 | 18.2 | 14.6 |
| High school diploma or GED | 27.1 | 35.7 | 38.4 | 40.4 | 42.2 | 39.3 |
| Some college | 7.6 | 12.7 | 16.3 | 20.6 | 23.5 | 29.7 |
| Bachelor's degree or higher | 4.0 | 7.3 | 12.2 | 13.7 | 16.1 | 16.5 |
| | | | **Hispanic** | | | |
| Mother's highest education level | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Less than high school diploma | 61.8 | 60.4 | 60.5 | 55.8 | 51.8 | 49.2 |
| High school diploma or GED | 28.9 | 28.3 | 28.2 | 28.7 | 26.9 | 25.2 |
| Some college | 5.7 | 7.2 | 7.7 | 10.2 | 15.6 | 18.2 |
| Bachelor's degree or higher | 3.5 | 4.1 | 3.7 | 5.2 | 5.7 | 7.4 |
| Father's highest education level | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Less than high school diploma | 58.3 | 57.2 | 56.3 | 51.6 | 51.1 | 48.9 |
| High school diploma or GED | 24.9 | 25.0 | 25.0 | 27.2 | 23.2 | 26.2 |
| Some college | 8.4 | 9.5 | 10.5 | 13.4 | 17.5 | 14.7 |
| Bachelor's degree or higher | 8.4 | 8.3 | 8.2 | 7.7 | 8.3 | 10.1 |

NOTE: Information on parents' highest education level is available only for those parents who live in the same household with their child. The Current Population Survey (CPS) questions used to obtain educational attainment were changed in 1994 and weights were adjusted; see *Supplemental Note 1* for more information. Percentages may not add to 100.0 due to rounding. See *Supplemental Note 3* for information on the racial-ethnic categories.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys, various years.

# Language Spoken at Home by Hispanic Students

**Table 6-1** **Number and percentage distribution of students enrolled in grades K–12, by race-ethnicity: 1999**

| | | Students in grades K–12 | | | |
|---|---|---|---|---|---|
| | Total | White | Black | Hispanic | Othe |
| Number (in thousands) | 51,979 | 33,831 | 8,270 | 7,199 | 2,679 |
| Percent | 100.0 | 65.1 | 15.9 | 13.8 | 5.2 |

NOTE: Percentages may not add to totals due to rounding. See *Supplemental Note 2* for information on the National Household Education Survey (NHES). See *Supplemental Note 3* for information on the racial-ethnic categories.

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Parent Interview Component).

**Table 6-2** **Percentage distribution of Hispanic students in grades K–12, by language spoken at home and grade: 1999**

| Grade enrolled | Total | Spoke mostly English at home | Spoke English and Spanish equally at home | Spoke mostly Spanish at home | Spoke English and other language equally/ spoke other language |
|---|---|---|---|---|---|
| **Total** | **100.0** | **57.2** | **17.0** | **25.1** | **0.7** |
| K–5 | 100.0 | 54.8 | 16.2 | 28.2 | 0.8 |
| 6–8 | 100.0 | 58.2 | 20.1 | 20.6 | 1.0 |
| 9–12 | 100.0 | 61.5 | 15.9 | 22.4 | 0.2 |

NOTE: Percentages may not add to 100.0 due to rounding. See *Supplemental Note 2* for information on the National Household Education Survey (NHES).

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Parent Interview Component).

**Table 6-3** **Percentage distribution of Hispanic students in grades K–12, by language spoken at home, grade, and mother's birth place: 1999**

| Grade enrolled | Total | Spoke mostly English at home | Spoke English and Spanish equally at home | Spoke mostly Spanish at home | Spoke English and other language equally/ spoke other language |
|---|---|---|---|---|---|
| | | | **Mother was born in the United States** | | |
| **Total** | **100.0** | **89.3** | **5.9** | **4.5** | **0.4** |
| K–5 | 100.0 | 89.6 | 5.0 | 5.2 | 0.2 |
| 6–8 | 100.0 | 86.0 | 9.7 | 3.6 | 0.8 |
| 9–12 | 100.0 | 91.6 | 4.2 | 3.8 | 0.4 |
| | | | **Mother was not born in the United States** | | |
| **Total** | **100.0** | **27.8** | **27.3** | **43.8** | **1.0** |
| K–5 | 100.0 | 24.4 | 25.7 | 48.6 | 1.3 |
| 6–8 | 100.0 | 29.3 | 32.1 | 37.3 | 1.4 |
| 9–12 | 100.0 | 34.3 | 26.9 | 38.7 | 0.1 |

NOTE: Information is shown only for students who lived with their mothers. Four percent of students did not live with their mothers. Percentages may not add to 100.0 due to rounding. See *Supplemental Note 2* for information on the National Household Education Survey (NHES).

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Parent Interview Component).

# Language Spoken at Home by Hispanic Students

**Table 6-4 Percentage distribution of Hispanic students in grades K–12, by language spoken at home and various demographic characteristics: 1999**

| Demographic characteristic | Total | Language spoken at home by student<br>Mostly English | English and Spanish equally | Mostly Spanish |
|---|---|---|---|---|
| **Total** | **100.0** | **100.0** | 100.0 | **100.0** |
| Language spoken most at home by mother[1] | | | | |
| English | 48.3 | 82.0 | 6.0 | 2.0 |
| Spanish[2] | 51.0 | 17.2 | 93.7 | 98.0 |
| English and other language equally/other language | 0.7 | 0.7 | 0.3 | 0.0 |
| Mother's place of birth[1] | | | | |
| United States/territories | 46.8 | 73.8 | 15.8 | 8.3 |
| Other countries | 53.2 | 26.2 | 84.2 | 91.7 |
| Mother's first language[1] | | | | |
| English | 32.8 | 56.1 | 3.1 | 1.5 |
| Spanish[2] | 65.2 | 41.3 | 96.6 | 98.3 |
| English and other language equally/other language | 2.0 | 2.6 | 0.3 | 0.2 |
| Parents' highest education level | | | | |
| Less than high school diploma | 30.4 | 17.2 | 45.8 | 50.7 |
| High school diploma or GED or higher | 69.6 | 82.8 | 54.2 | 49.3 |
| High school diploma or GED | 27.9 | 28.4 | 25.2 | 28.5 |
| Some college/vocational/technical | 25.2 | 32.5 | 18.8 | 12.9 |
| Bachelor's degree | 9.0 | 11.5 | 5.5 | 5.3 |
| Graduate/professional school | 7.5 | 10.4 | 4.7 | 2.6 |
| Household income | | | | |
| $20,000 or less | 45.6 | 36.6 | 55.1 | 60.2 |
| 10,000 or less | 21.0 | 17.5 | 21.5 | 28.6 |
| 10,001–20,000 | 24.6 | 19.1 | 33.6 | 31.6 |
| 20,001 or more | 54.4 | 63.4 | 44.9 | 39.8 |
| 20,001–30,000 | 26.7 | 23.7 | 31.4 | 30.4 |
| 30,001–50,000 | 11.5 | 15.5 | 6.8 | 4.9 |
| 50,001 or more | 16.2 | 24.2 | 6.7 | 4.5 |

[1] Information is only shown for students who lived with their mothers. Four percent of students did not live with their mothers.

[2] Mothers of Hispanic students were asked about language spoken mostly at home or their first language. The response options were : English, Spanish, English and Spanish equally, English and another language equally, and another language. This category used in the table includes mothers who spoke Spanish, and English and Spanish equally.

NOTE: Included in the totals but not shown separately are Hispanic students who spoke English and other languages equally or primarily other languages at home. Percentages may not add to 100.0 due to rounding. See *Supplemental Note 2* for information on the National Household Education Survey (NHES).

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Parent Interview Component)

# Past and Projected Postsecondary Enrollments

Table 7-1 **Total enrollment in degree-granting 2- and 4-year postsecondary institutions (in thousands) by sex, enrollment status, and type of institution, with projections: Fall 1970–2009**

| | | Sex | | Enrollment status | | Type of institution | |
|---|---|---|---|---|---|---|---|
| Year | Total | Male | Female | Full-time | Part-time | 4-year | 2-year |
| 1970 | 8,581 | 5,044 | 3,537 | 5,816 | 2,765 | 6,262 | 2,319 |
| 1972 | 9,215 | 5,239 | 3,976 | 6,072 | 3,142 | 6,459 | 2,756 |
| 1974 | 10,224 | 5,622 | 4,601 | 6,370 | 3,853 | 6,820 | 3,404 |
| 1976 | 11,012 | 5,811 | 5,201 | 6,717 | 4,295 | 7,129 | 3,883 |
| 1978 | 11,260 | 5,641 | 5,619 | 6,668 | 4,592 | 7,232 | 4,028 |
| 1980 | 12,097 | 5,874 | 6,223 | 7,098 | 4,999 | 7,571 | 4,526 |
| 1982 | 12,426 | 6,031 | 6,394 | 7,221 | 5,205 | 7,654 | 4,772 |
| 1984 | 12,242 | 5,864 | 6,378 | 7,098 | 5,144 | 7,711 | 4,531 |
| 1986 | 12,504 | 5,885 | 6,619 | 7,120 | 5,384 | 7,824 | 4,680 |
| 1988 | 13,055 | 6,002 | 7,053 | 7,437 | 5,619 | 8,180 | 4,875 |
| 1990 | 13,819 | 6,284 | 7,535 | 7,821 | 5,998 | 8,579 | 5,240 |
| 1991 | 14,359 | 6,502 | 7,857 | 8,115 | 6,244 | 8,707 | 5,652 |
| 1992 | 14,487 | 6,524 | 7,963 | 8,162 | 6,325 | 8,765 | 5,722 |
| 1993 | 14,305 | 6,427 | 7,877 | 8,128 | 6,177 | 8,739 | 5,566 |
| 1994 | 14,279 | 6,372 | 7,907 | 8,138 | 6,141 | 8,749 | 5,530 |
| 1995 | 14,262 | 6,343 | 7,919 | 8,129 | 6,133 | 8,769 | 5,493 |
| 1996 | 14,300 | 6,344 | 7,956 | 8,213 | 6,087 | 8,803 | 5,497 |
| | | | | Projected* | | | |
| 1997 | 14,390 | 6,313 | 8,077 | 8,114 | 6,276 | 8,805 | 5,585 |
| 1998 | 14,608 | 6,297 | 8,311 | 8,242 | 6,366 | 8,928 | 5,680 |
| 1999 | 14,881 | 6,370 | 8,511 | 8,449 | 6,432 | 9,106 | 5,775 |
| 2000 | 15,072 | 6,432 | 8,639 | 8,600 | 6,471 | 9,234 | 5,838 |
| 2001 | 15,158 | 6,471 | 8,688 | 8,690 | 6,469 | 9,298 | 5,861 |
| 2002 | 15,168 | 6,486 | 8,682 | 8,702 | 6,466 | 9,309 | 5,859 |
| 2003 | 15,262 | 6,525 | 8,736 | 8,787 | 6,475 | 9,376 | 5,885 |
| 2004 | 15,400 | 6,577 | 8,823 | 8,895 | 6,505 | 9,465 | 5,935 |
| 2005 | 15,556 | 6,628 | 8,928 | 9,019 | 6,537 | 9,572 | 5,984 |
| 2006 | 15,739 | 6,691 | 9,048 | 9,169 | 6,570 | 9,696 | 6,042 |
| 2007 | 15,929 | 6,763 | 9,166 | 9,325 | 6,604 | 9,822 | 6,107 |
| 2008 | 16,144 | 6,852 | 9,291 | 9,503 | 6,640 | 9,963 | 6,181 |
| 2009 | 16,336 | 6,937 | 9,399 | 9,666 | 6,670 | 10,092 | 6,244 |

* Projections based on data through 1996.

NOTE: Details may not add to totals due to rounding.

SOURCE: U.S. Department of Education, NCES. *Digest of Education Statistics 1998* (NCES 1999-036), 1999, tables 172 and 173, and *Projections of Education Statistics to 2009* (NCES 1999-038), 1999, tables 3, 4, and 5.

# Undergraduate Enrollment of Minority Students

Table 8-1 **Percentage distribution of undergraduate enrollment in postsecondary education institutions according to race-ethnicity, by Carnegie Classification: Fall 1976 and Fall 1995**

| | | | | Minority | | | | |
|---|---|---|---|---|---|---|---|---|
| 1994 Carnegie classification | Number enrolled | Total | White | Total minority | Black | Hispanic | Asian or Pacific Islander | American Indian/ Alaskan Native |
| | | | | | 1976–77 | | | |
| **Total** | **9,428,298** | **100.0** | **82.6** | **17.4** | **10.1** | **4.7** | **1.8** | **0.7** |
| Research Universities I | 1,305,976 | 100.0 | 88.2 | 11.8 | 5.8 | 2.6 | 2.9 | 0.5 |
| Research Universities II | 467,364 | 100.0 | 92.1 | 7.9 | 5.1 | 1.4 | 0.8 | 0.6 |
| Doctoral Universities I and II | 801,263 | 100.0 | 85.0 | 15.0 | 8.9 | 4.5 | 1.0 | 0.6 |
| Master's Universities/Colleges I and II | 2,089,078 | 100.0 | 81.3 | 18.7 | 11.5 | 5.0 | 1.6 | 0.6 |
| Baccalaureate Colleges I and II | 750,398 | 100.0 | 81.1 | 18.9 | 12.2 | 5.2 | 1.0 | 0.5 |
| Associate of Arts Colleges | 3,710,684 | 100.0 | 79.9 | 20.1 | 11.2 | 5.8 | 2.1 | 1.0 |
| Specialized Institutions | 221,025 | 100.0 | 86.7 | 13.3 | 8.2 | 2.7 | 1.2 | 1.2 |
| | | | | | 1995–96 | | | |
| **Total** | **12,231,719** | **100.0** | **73.6** | **26.4** | **11.1** | **8.5** | **5.8** | **1.0** |
| Research Universities I | 1,413,334 | 100.0 | 75.2 | 24.8 | 7.1 | 6.2 | 10.9 | 0.6 |
| Research Universities II | 480,076 | 100.0 | 83.0 | 17.0 | 6.5 | 4.5 | 5.0 | 1.0 |
| Doctoral Universities I and II | 923,517 | 100.0 | 76.9 | 23.1 | 11.0 | 6.1 | 5.0 | 0.9 |
| Master's Universities/Colleges I and II | 2,509,428 | 100.0 | 74.3 | 25.7 | 12.8 | 7.4 | 4.7 | 0.9 |
| Baccalaureate Colleges I and II | 1,130,624 | 100.0 | 79.7 | 20.3 | 12.9 | 4.0 | 2.8 | 0.7 |
| Associate of Arts Colleges | 5,485,405 | 100.0 | 70.3 | 29.7 | 11.5 | 11.3 | 5.8 | 1.1 |
| Specialized Institutions | 289,335 | 100.0 | 73.6 | 26.4 | 11.2 | 6.3 | 5.2 | 3.7 |

NOTE: For 1976–77, students whose race-ethnicity was unknown were excluded from the analysis. Percentages may not add to 100.0 due to rounding. See *Supplemental Note 3* for information on the racial-ethnic categories. Included in the 1976 enrollment totals but not shown separately are institutions with unknown Carnegie classifications. See *Supplemental Note 5* for definitions of Carnegie Classifications.

SOURCE: U.S. Department of Education, NCES. 1976 Higher Education General Information Survey (HEGIS) and 1995 Integrated Postsecondary Education Data System (IPEDS) "Fall Enrollment" surveys.

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# Participation in Adult Learning

Table 10-1 Percentage of adults ages 18 or older who participated in learning activities in the past 12 months, by educational attainment and age: 1991, 1995, and 1999

| | | | 1999 | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Type of adult learning activity | | | | |
| | | | | | Credential | | | |
| Educational attainment and age | 1991 Total[1] | 1995 Total[1] | Total[1] | Basic skills | Full-time | Part-time | Work-related | Personal |
| Total | 37.9 | 44.3 | 49.6 | 2.2 | 7.1 | 9.4 | 23.2 | 22.8 |
| Educational attainment | | | | | | | | |
| Grade 8 or less | 8.0 | 10.9 | 13.9 | 4.2 | 0 | 0.6 | 1.5 | 5.6 |
| Grades 9–12[2] | 16.1 | 23.5 | 26.6 | 8.3 | 1.2 | 4.4 | 6.7 | 10.4 |
| High school diploma or GED | 26.7 | 33.0 | 40.5 | 2.3 | 4.6 | 7.0 | 17.4 | 18.8 |
| Some college/ technical/ vocational school | 52.6 | 58.7 | 61.0 | 0.9 | 15.2 | 13.7 | 25.2 | 26.6 |
| Bachelor's degree or higher | 56.5 | 62.1 | 65.0 | (3) | 6.0 | 11.6 | 38.4 | 31.9 |
| Age | | | | | | | | |
| 18–24 | 69.1 | 68.3 | 72.8 | 10.4 | 37.4 | 15.1 | 19.4 | 21.5 |
| 25–34 | 42.2 | 53.0 | 60.1 | 2.1 | 8.2 | 15.2 | 29.7 | 25.3 |
| 35–44 | 46.6 | 51.0 | 52.3 | 1.0 | 2.5 | 10.3 | 29.5 | 24.8 |
| 45–54 | 33.3 | 47.0 | 51.8 | 0.6 | 1.6 | 8.2 | 28.4 | 27.1 |
| 55–64 | 23.0 | 28.2 | 37.2 | 0.4 | 0.2 | 4.7 | 19.8 | 19.3 |
| 65 and older | 10.5 | 15.2 | 19.6 | 0.6 | 0.3 | 1.5 | 3.8 | 14.6 |

[1] Estimates includes participation in basic skills, work-related, credential programs, English as a Second Language, personal interest courses, apprenticeships, or participation in credential program full or part time. Adults who participated in apprenticeships and programs for English as a Second Language are included in the totals but are not shown separately.

[2] In 1995 and 1999, includes adults whose highest education level was grades 9–12 who had not received a high school diploma; in 1991 includes only adults whose highest education level was grades 9–11.

[3] Only adults who had not received a high school diploma or equivalent, who received a high school diploma in the past 12 months, or who received a high school diploma in a foreign country and did not have a bachelor's degree were asked about their participation in basic education/General Education Development (GED) activities.

NOTE: See *Supplemental Note 2* for information on the National Household Education Survey (NHES).

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1991, 1995, and 1999 (Adult Education Component).

Table 10-2 Percentage of adults age 18 or older who participated in various learning activities with different providers, by type of activity: 1999

| | Type of provider for various adult learning activities | | | | | | |
|---|---|---|---|---|---|---|---|
| Type of activity and age | Elementary/ secondary | Post-secondary | Trade organization | Private | Business | Government | Other |
| Credential | 1.2 | 75.1 | 9.4 | 1.7 | 6.0 | 3.9 | 2.7 |
| Full-time | 0.6 | 87.8 | 5.8 | 1.2 | 0.9 | 2.4 | 1.3 |
| Part-time | 1.6 | 65.5 | 12.1 | 2.1 | 10.0 | 5.0 | 3.7 |
| Work-related | 5.0 | 21.4 | 12.5 | 5.8 | 53.6 | 13.8 | 4.4 |
| Personal | 5.1 | 15.6 | 11.1 | 47.5 | 20.0 | 10.1 | 4.5 |

NOTE: Information on the type of provider of adult learning activities was aggregated as follows. Elementary/secondary: elementary, junior high school, or high school; postsecondary: 2-year community or junior college, 2-year vocational school, or 4-year college or university; trade organization: private vocational, trade, business, hospital, flight school, or adult learning center; private: private community organization, church or religious organization, tutor, or private instructor; business: business or industry, or professional association; and government: federal, state, county, or local government, or public library. Percentages were based on individuals who participated in work-related activities or courses for personal development only. Percentages can add to more than 100.0 because individuals can take more than one work-related or personal-development course. See *Supplemental Note 2* for information on the National Household Education Survey (NHES).

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Adult Education Component).

## Kindergartners' Skills and Proficiency in Reading and Mathematics

**Table 11-1** **Percentage of first-time kindergartners achieving each reading and mathematics proficiency level, by child and family characteristics: Fall 1998**

| | Reading proficiencies | | | Mathematics proficiencies | | |
|---|---|---|---|---|---|---|
| Characteristic | Letter recognition | Beginning sounds | Ending sounds | Number and shape | Relative size | Ordinal sequence |
| **Total** | **66** | **29** | **17** | **94** | **58** | **20** |
| Sex | | | | | | |
| Male | 62 | 26 | 15 | 93 | 57 | 21 |
| Female | 70 | 32 | 19 | 95 | 59 | 20 |
| Mother's highest education level | | | | | | |
| Less than high school | 38 | 9 | 4 | 84 | 32 | 6 |
| High school diploma or equivalent | 57 | 20 | 11 | 92 | 50 | 13 |
| Some college, including vocational/technical | 69 | 30 | 17 | 96 | 61 | 20 |
| Bachelor's degree or higher | 86 | 50 | 32 | 99 | 79 | 37 |
| Race-ethnicity | | | | | | |
| White | 73 | 34 | 20 | 96 | 66 | 26 |
| Black | 55 | 19 | 10 | 90 | 42 | 9 |
| Asian | 79 | 43 | 29 | 98 | 70 | 31 |
| Hispanic | 49 | 19 | 10 | 90 | 44 | 12 |

NOTE: Based on those assessed in English. Excludes 19 percent of Asian and 30 percent of Hispanic children. See *Supplemental Note 3* for information on the racial-ethnic categories.

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

## Kindergartners' Overall Reading and Mathematics Performance

**Table 12-1** **Mean reading *t*-scores of first-time kindergartners, and percentage distribution of quartile scores, by child and family characteristics: Fall 1998**

| | | Quartile scores | | | |
|---|---|---|---|---|---|
| Characteristic | Mean *t*-score | 0–25 percent | 26–50 percent | 51–75 percent | 76–100 percent |
| **Total** | **50** | **25** | **25** | **25** | **25** |
| Sex | | | | | |
| Male | 49 | 29 | 25 | 24 | 22 |
| Female | 51 | 21 | 25 | 26 | 28 |
| Mother's highest education level | | | | | |
| Less than high school | 43 | 52 | 26 | 16 | 6 |
| High school diploma or equivalent | 48 | 32 | 28 | 24 | 16 |
| Some college, including vocational/technical | 51 | 21 | 27 | 26 | 26 |
| Bachelor's degree or higher | 56 | 8 | 18 | 28 | 46 |
| Child's race-ethnicity | | | | | |
| White | 52 | 18 | 24 | 28 | 30 |
| Black | 47 | 34 | 30 | 21 | 15 |
| Asian | 55 | 13 | 24 | 24 | 39 |
| Hispanic | 46 | 42 | 24 | 19 | 15 |

NOTE: Based on those assessed in English. Excludes 19 percent of Asian and 30 percent of Hispanic children. Percentages may not add to 100 due to rounding. T-scores normalize the actual distribution to an average of 50 and a standard deviation of 50. See *Supplemental Note 3* for information on the racial-ethnic categories.

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

# Kindergartners' Overall Reading and Mathematics Performance

**Table 12-2** **Mean mathematics *t*-scores of first-time kindergartners, and percentage distribution of quartile scores, by child and family characteristics: Fall 1998**

| | | Quartile scores | | | |
|---|---|---|---|---|---|
| Characteristic | Mean t-score | 0–25 percent | 26–50 percent | 51–75 percent | 76–100 percent |
| **Total** | **50** | **25** | **25** | **25** | **25** |
| Sex | | | | | |
| Male | 50 | 26 | 24 | 24 | 26 |
| Female | 50 | 24 | 26 | 26 | 24 |
| Mother's highest education level | | | | | |
| Less than high school | 43 | 53 | 25 | 15 | 7 |
| High school diploma or equivalent | 48 | 32 | 28 | 23 | 17 |
| Some college, including vocational/technical | 51 | 21 | 27 | 28 | 24 |
| Bachelor's degree or higher | 56 | 18 | 18 | 19 | 46 |
| Child's race-ethnicity | | | | | |
| White | 52 | 18 | 23 | 27 | 32 |
| Black | 46 | 39 | 30 | 21 | 10 |
| Asian | 54 | 13 | 25 | 24 | 38 |
| Hispanic | 47 | 40 | 26 | 20 | 14 |

NOTE: Based on those assessed in English. Excludes 19 percent of Asian and 30 percent of Hispanic children. Percentages may not add to 100 due to rounding. T-scores normalize the actual distribution to an average of 50 and a standard deviation of 50. See *Supplemental Note 3* for information on the racial-ethnic categories.

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

# Reading Performance of Students in Grades 4, 8, and 12

**Table 13-1 Average reading performance, by grade and selected student characteristics: 1992, 1994, and 1998**

| Student characteristic | Grade 4 | | | Grade 8 | | | Grade 12 | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1992 | 1994 | 1998 | 1992 | 1994 | 1998 | 1992 | 1994 | 1998 |
| **Total** | **217** | **214** | **217** | **260** | **260** | **264** | **292** | **287** | **291** |
| Sex | | | | | | | | | |
| Male | 213 | 209 | 214 | 254 | 252 | 257 | 287 | 280 | 283 |
| Female | 221 | 220 | 220 | 267 | 267 | 270 | 297 | 294 | 298 |
| Race-ethnicity | | | | | | | | | |
| White | 225 | 224 | 227 | 267 | 268 | 272 | 298 | 294 | 298 |
| Black | 193 | 187 | 194 | 238 | 237 | 243 | 273 | 265 | 270 |
| Hispanic | 201 | 191 | 196 | 241 | 240 | 244 | 278 | 270 | 275 |
| Asian/Pacific Islander | 214 | 229 | 225 | 270 | 268 | 271 | 292 | 280 | 289 |
| American Indian/Alaskan Native | 207 | 201 | 202 | 251 | 251 | 248 | — | 275 | 276 |

— Not available.

NOTE: See *Supplemental Note 3* for information on the racial-ethnic categories. See *Supplemental Note 6* for information on the National Assessment of Educational Progress (NAEP).

SOURCE: U.S. Department of Education, NCES. *NAEP 1998 Reading, A Report Card for the Nation and the States* (NCES 1999–500), 1999.

**Table 13-2 Percentage of students scoring at or above each achievement level in reading, by grade: 1992, 1994, and 1998**

| Achievement level | Grade 4 | | | Grade 8 | | | Grade 12 | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1992 | 1994 | 1998 | 1992 | 1994 | 1998 | 1992 | 1994 | 1998 |
| Below Basic | 38 | 40 | 38 | 31 | 30 | 26 | 20 | 25 | 23 |
| At or Above Basic | 62 | 60 | 62 | 69 | 70 | 74 | 80 | 75 | 77 |
| At or Above Proficient | 29 | 30 | 31 | 29 | 30 | 33 | 40 | 36 | 40 |
| At or Above Advanced | 6 | 7 | 7 | 3 | 3 | 3 | 4 | 4 | 6 |

NOTE: See *Supplemental Note 6* for information on the National Assessment of Education Progress (NAEP).

SOURCE: U.S. Department of Education, NCES. *NAEP 1998 Reading, A Report Card for the Nation and the States* (NCES 1999–500), 1999.

# Writing Performance of Students in Grades 4, 8, and 12

**Table 14-1** **Percentage of students scoring within each of the NAEP writing assessment achievement levels, by grade and selected student characteristics: 1998**

| Student characteristic | Achievement level | | | |
|---|---|---|---|---|
| | Below basic | Basic | Proficient | Advanced |
| **Grade 4** | **16** | **61** | **22** | **1** |
| Sex | | | | |
| Male | 21 | 63 | 16 | 1 |
| Female | 11 | 59 | 28 | 2 |
| Race-ethnicity | | | | |
| White | 10 | 61 | 27 | 2 |
| Black | 31 | 61 | 8 | 0 |
| Hispanic | 28 | 62 | 10 | 0 |
| Asian/Pacific Islander | 7 | 57 | 32 | 4 |
| American Indian/Alaskan Native | 24 | 65 | 11 | 1 |
| **Grade 8** | **16** | **58** | **25** | **1** |
| Sex | | | | |
| Male | 22 | 61 | 17 | 0 |
| Female | 9 | 55 | 34 | 2 |
| Race-ethnicity | | | | |
| White | 10 | 56 | 32 | 2 |
| Black | 28 | 64 | 8 | 0 |
| Hispanic | 31 | 58 | 11 | 0 |
| Asian/Pacific Islander | 10 | 55 | 33 | 2 |
| American Indian/Alaskan Native | 27 | 64 | 9 | 0 |
| **Grade 12** | **22** | **57** | **21** | **1** |
| Sex | | | | |
| Male | 30 | 56 | 14 | 0 |
| Female | 14 | 58 | 27 | 1 |
| Race-ethnicity | | | | |
| White | 16 | 57 | 25 | 1 |
| Black | 36 | 56 | 8 | 0 |
| Hispanic | 35 | 54 | 10 | 0 |
| Asian/Pacific Islander | 22 | 54 | 23 | 1 |
| American Indian/Alaskan Native | 42 | 49 | 9 | 0 |

NOTE: Percentages may not add to 100 due to rounding. See *Supplemental Note 3* for information on the racial-ethnic categories. See *Supplemental Note 6* for information on the National Assessment of Educational Progress (NAEP).

SOURCE: U.S. Department of Education, NCES. *NAEP 1998 Writing: A Report Card for the Nation and the States* (NCES 1999–462), 1999.

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## Writing Performance of Students in Grades 4, 8, and 12

Table 14-2 Percentage and average writing scale scores of students who reported the occurrence of various school and home factors, by grade and frequency of reports: 1998

| Frequency | Percentage of students |  |  | Average scale score |  |  |
|---|---|---|---|---|---|---|
|  | Grade 4 | Grade 8 | Grade 12 | Grade 4 | Grade 8 | Grade 12 |
| Teachers talk to students about what they are writing |  |  |  |  |  |  |
| Always | 24 | 51 | 50 | 149 | 153 | 153 |
| Sometimes | 65 | 42 | 43 | 151 | 148 | 150 |
| Never | 11 | 7 | 8 | 146 | 139 | 137 |
| Teachers ask students to write more than one draft of a paper |  |  |  |  |  |  |
| Always | 19 | 47 | 50 | 151 | 156 | 153 |
| Sometimes | 62 | 43 | 39 | 150 | 146 | 148 |
| Never | 19 | 10 | 12 | 151 | 143 | 146 |
| Students discuss their studies with someone at home |  |  |  |  |  |  |
| At least once a week | 76 | 69 | 67 | 153 | 157 | 156 |
| Once/twice a month | 7 | 11 | 13 | 149 | 149 | 146 |
| Never/hardly ever | 18 | 20 | 21 | 137 | 137 | 137 |

NOTE: See *Supplemental Note 6* for information on the National Assessment of Educational Progress (NAEP). Percentages may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, NCES. *NAEP 1998 Writing: A Report Card for the Nation and the States* (NCES 1999–462). 1999.

## Mathematics Performance of Students in Grades 4, 8, and 12

Table 15-1 Percentage of students scoring at or above each achievement level in mathematics, by grade: 1990, 1992, and 1996

| Achievement level | Grade 4 |  |  | Grade 8 |  |  | Grade 12 |  |  |
|---|---|---|---|---|---|---|---|---|---|
|  | 1990 | 1992 | 1996 | 1990 | 1992 | 1996 | 1990 | 1992 | 1996 |
| Below Basic | 50 | 41 | 36 | 48 | 42 | 38 | 42 | 36 | 31 |
| At or Above Basic | 50 | 59 | 64 | 52 | 58 | 62 | 58 | 64 | 69 |
| At or Above Proficient | 13 | 18 | 21 | 15 | 21 | 24 | 12 | 15 | 16 |
| At or Above Advanced | 1 | 2 | 2 | 2 | 3 | 4 | 1 | 2 | 2 |

NOTE: See *Supplemental Note 6* for information on the National Assessment of Educational Progress (NAEP). Percentages may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, NCES. *NAEP 1996 Mathematics Report Card for the Nation and the States* (NCES 97–488). 1997.

# Mathematics Performance of Students in Grades 4, 8, and 12

**Table 15-2** **Average mathematics performance (scale score), by grade and selected student characteristics: 1990, 1992, and 1996**

| **Student characteristic** | Grade 4 | | | Grade 8 | | | Grade 12 | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1990 | 1992 | 1996 | 1990 | 1992 | 1996 | 1990 | 1992 | 1996 |
| **Total** | **213** | **220** | **224** | **263** | **268** | **272** | **294** | **300** | **304** |
| Sex | | | | | | | | | |
| Male | 214 | 221 | 226 | 263 | 268 | 272 | 297 | 301 | 305 |
| Female | 213 | 219 | 222 | 262 | 269 | 272 | 292 | 298 | 303 |
| Race-ethnicity | | | | | | | | | |
| White | 220 | 228 | 232 | 270 | 278 | 282 | 301 | 306 | 311 |
| Black | 189 | 193 | 200 | 238 | 238 | 243 | 268 | 276 | 280 |
| Hispanic | 198 | 202 | 206 | 244 | 247 | 251 | 276 | 284 | 287 |
| Asian/Pacific Islander | 228 | 232 | 232 | 279 | 289 | 274 | 311 | 316 | 319 |
| American Indian/Alaskan Native | 208 | 211 | 216 | 246 | 255 | 264 | — | — | 297 |

— Not available

NOTE: See *Supplemental Note 3* for information on the racial-ethnic categories. See *Supplemental Note 6* for information on the National Assessment of Educational Progress (NAEP).

SOURCE: U.S. Department of Education, NCES. *NAEP 1996 Mathematics Report Card for the Nation and the States* (NCES 97–488), 1997.

# High Performance in Mathematics and Science

**Table 16-1** **Percentage of 17-year-old students scoring at or above 300 on the NAEP mathematics and science assessments, by sex: 1977–96**

| Sex | 1977 | 1978 | 1982 | 1986 | 1990 | 1992 | 1994 | 1996 |
|---|---|---|---|---|---|---|---|---|
| | | | | Mathematics | | | | |
| **Total** | — | **51.5** | **48.5** | **51.7** | **56.1** | **59.1** | **58.6** | **60.1** |
| Male | — | 55.1 | 51.9 | 54.6 | 57.6 | 60.5 | 60.2 | 62.7 |
| Female | — | 48.2 | 45.3 | 48.9 | 54.7 | 57.7 | 57.2 | 57.6 |
| | | | | Science | | | | |
| **Total** | **41.7** | — | **37.3** | **41.3** | **43.3** | **46.6** | **47.5** | **48.4** |
| Male | 48.8 | — | 45.2 | 48.8 | 48.2 | 50.9 | 52.9 | 53.1 |
| Female | 34.8 | — | 29.9 | 34.1 | 38.7 | 42.0 | 42.4 | 43.9 |

— Not available

NOTE: See *Supplemental Note 6* for information on the National Assessment of Educational Progress (NAEP).

SOURCE: U.S. Department of Education, NCES. National Assessment of Educational Progress, *NAEP 1996 Trends in Academic Progress* (NCES 2000–499), 2000 (forthcoming).

# Trends in the Achievement Gap in Reading Between White and Black Students

**Table 17-1** **Average reading achievement scale scores, by age, race-ethnicity, and difference: 1971–96**

| Race-ethnicity and difference | 1971 | 1975 | 1980 | 1984 | 1988 | 1990 | 1992 | 1994 | 1996 |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | **Age 9** | | | | |
| White | 214 | 217 | 221 | 218 | 218 | 217 | 218 | 218 | 220 |
| Black | 170 | 181 | 189 | 186 | 189 | 182 | 185 | 185 | 190 |
| Difference | 44 | 35 | 32 | 32 | 29 | 35 | 33 | 33 | 30 |
| | | | | | **Age 13** | | | | |
| White | 261 | 262 | 264 | 263 | 261 | 262 | 266 | 265 | 267 |
| Black | 222 | 226 | 233 | 236 | 243 | 242 | 238 | 234 | 236 |
| Difference | 39 | 36 | 32 | 26 | 18 | 21 | 29 | 31 | 31 |
| | | | | | **Age 17** | | | | |
| White | 291 | 293 | 293 | 295 | 295 | 297 | 297 | 296 | 294 |
| Black | 239 | 241 | 243 | 264 | 274 | 267 | 261 | 266 | 265 |
| Difference | 53 | 52 | 50 | 31 | 20 | 29 | 37 | 30 | 29 |

NOTE: See *Supplemental Note 6* for information on the National Assessment of Educational Progress (NAEP).

SOURCE: U.S. Department of Education, NCES. *NAEP 1996 Trends in Academic Progress*, (NCES 2000–499), 2000 (forthcoming).

# International Comparisons of Student Performance in Mathematics

**Table 18-1**　**Average mathematics performance (scale score) of students in grades 4, 8, and in their final year of secondary school, by sex and country: 1995**

| Country | Grade 4[1] |  |  | Grade 8[1] |  |  | Final year of secondary school |  |  |
|---|---|---|---|---|---|---|---|---|---|
|  | Total | Male | Female | Total | Male | Female | Total | Male | Female |
| **International average** | **529** | **535** | **533** | **513** | **519** | **512** | **500** | **518** | **485** |
| Australia[2] | 546 | 547 | 545 | 530 | 527 | 532 | 522 | 540 | 510 |
| Austria[2] | 559 | 563 | 555 | 539 | 544 | 536 | 518 | 545 | 503 |
| Belgium (Flemish) | — | — | — | 565 | 563 | 567 | — | — | — |
| Belgium (French)[2] | — | — | — | 526 | 530 | 524 | — | — | — |
| Bulgaria[2] | — | — | — | 540 | — | — | — | — | — |
| Canada[2] | 532 | 534 | 531 | 527 | 526 | 530 | 519 | 537 | 504 |
| Colombia[2] | — | — | — | 385 | 386 | 384 | — | — | — |
| Cyprus[2] | 502 | 506 | 499 | 474 | 472 | 475 | 446 | 454 | 439 |
| Czech Republic | 567 | 568 | 566 | 564 | 569 | 558 | 466 | 488 | 443 |
| Denmark[2] | — | — | — | 502 | 511 | 494 | 547 | 575 | 523 |
| England | 513 | 515 | 510 | 506 | 508 | 504 | — | — | — |
| France[2] | — | — | — | 538 | 542 | 536 | 523 | 544 | 506 |
| Germany[2] | — | — | — | 509 | 512 | 509 | 495 | 509 | 480 |
| Greece[2] | 492 | 491 | 493 | 484 | 490 | 478 | — | — | — |
| Hong Kong | 587 | 586 | 587 | 588 | 597 | 577 | — | — | — |
| Hungary[2] | 548 | 552 | 546 | 537 | 537 | 537 | 483 | 485 | 481 |
| Iceland[2] | 474 | 474 | 473 | 487 | 488 | 486 | 534 | 558 | 514 |
| Iran, Islamic Republic | 429 | 433 | 424 | 428 | 434 | 421 | — | — | — |
| Ireland | 550 | 548 | 551 | 527 | 535 | 520 | — | — | — |
| Israel[2] | 531 | 537 | 528 | 522 | 539 | 509 | — | — | — |
| Italy[2] | — | — | — | — | — | — | 476 | 490 | 464 |
| Japan | 597 | 601 | 593 | 605 | 609 | 600 | — | — | — |
| Korea | 611 | 618 | 603 | 607 | 615 | 598 | — | — | — |
| Kuwait[2] | 400 | — | — | 392 | — | — | — | — | — |
| Latvia (LSS)[2] | 525 | 521 | 530 | 493 | 496 | 491 | — | — | — |
| Lithuania[2] | — | — | — | 477 | 477 | 478 | 469 | 485 | 461 |
| Netherlands[2] | 577 | 585 | 569 | 541 | 545 | 536 | 560 | 585 | 533 |
| New Zealand | 499 | 494 | 504 | 508 | 512 | 503 | 522 | 536 | 507 |
| Norway[2] | 502 | 504 | 499 | 503 | 505 | 501 | 528 | 555 | 501 |
| Portugal | 475 | 478 | 473 | 454 | 460 | 449 | — | — | — |
| Romania[2] | — | — | — | 482 | 483 | 480 | — | — | — |
| Russian Federation[2] | — | — | — | 535 | 535 | 536 | 471 | 488 | 460 |
| Scotland[2] | 520 | 520 | 520 | 498 | 506 | 490 | — | — | — |
| Singapore | 625 | 620 | 630 | 643 | 642 | 645 | — | — | — |
| Slovak Republic | — | — | — | 547 | 549 | 545 | — | — | — |
| Slovenia[2] | 552 | 551 | 554 | 541 | 545 | 537 | 512 | 535 | 490 |
| South Africa[2] | — | — | — | 354 | 360 | 349 | 356 | 365 | 348 |
| Spain | — | — | — | 487 | 492 | 483 | — | — | — |
| Sweden | — | — | — | 519 | 520 | 518 | 552 | 573 | 531 |
| Switzerland | — | — | — | 545 | 548 | 543 | 540 | 555 | 522 |
| Thailand[2] | 490 | 485 | 496 | 522 | 517 | 526 | — | — | — |
| United States[2] | 545 | 545 | 544 | 500 | 502 | 497 | 461 | 466 | 456 |

— Not available.

[1] In most countries. See *Supplemental Note 7* for more information on the Third International Mathematics and Science Study (TIMSS).

[2] Did not satisfy one or more of the sampling or other guidelines for one or more grade levels. Latvia is designated LSS for Latvian-speaking schools only. See *Supplemental Note 7* for more information.

SOURCE: U.S. Department of Education, NCES. *Pursuing Excellence: A Study of U.S. Fourth-Grade Mathematics and Science Achievement in International Context* (NCES 97–255), 1997; U.S. Department of Education, NCES. *Pursuing Excellence: A Study of U.S. Eighth-Grade Mathematics and Science Teaching, Learning, Curriculum, and Achievement in International Context* (NCES 97–178), 1996; U.S. Department of Education, NCES. *Pursuing Excellence: A Study of U.S. Twelfth-Grade Mathematics and Science Achievement in International Context* (NCES 98–049), 1998.

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# Physics and Advanced Mathematics Performance

**Table 19-1** **Average physics and advanced mathematics scale scores in the final year of secondary school, by sex and country: 1995**

| | Physics | | | Advanced mathematics | | |
|---|---|---|---|---|---|---|
| **Country** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** |
| **International average** | **501** | **523** | **469** | **501** | **519** | **482** |
| Australia * | 518 | 532 | 490 | 525 | 531 | 517 |
| Austria* | 435 | 479 | 408 | 436 | 486 | 406 |
| Canada | 485 | 506 | 459 | 509 | 528 | 489 |
| Cyprus | 494 | 509 | 470 | 518 | 524 | 509 |
| Czech Republic | 451 | 503 | 419 | 469 | 524 | 432 |
| Denmark* | 534 | 542 | 500 | 522 | 529 | 510 |
| France | 466 | 478 | 450 | 557 | 567 | 543 |
| Germany | 522 | 542 | 479 | 465 | 484 | 452 |
| Greece | 486 | 495 | 468 | 513 | 516 | 505 |
| Italy* | — | — | — | 474 | 484 | 460 |
| Latvia | 488 | 509 | 467 | — | — | — |
| Lithuania | — | — | — | 516 | 542 | 490 |
| Norway | 581 | 594 | 544 | — | — | — |
| Russian Federation | 545 | 575 | 509 | 542 | 568 | 515 |
| Slovenia* | 523 | 546 | 455 | 475 | 484 | 464 |
| Sweden | 573 | 589 | 540 | 512 | 519 | 496 |
| Switzerland | 488 | 529 | 446 | 533 | 559 | 503 |
| United States* | 423 | 439 | 405 | 442 | 457 | 426 |

— Country did not participate in this component.

* Country did not satisfy one or more of the sampling or other guidelines. See *Supplemental Note 7* for more information on the Third International Mathematics and Science Study (TIMSS).

SOURCE: International Association for the Evaluation of Educational Achievement, TIMSS International Study Center, *Achievement in the Final Year of Secondary School: IEA's Third International Mathematics and Science Study,* 1998.

# Civics Performance of Students

**Table 20-1 Percentage distribution of students according to civics achievement level, by grade and selected student characteristics: 1998**

| Student characteristic | Achievement level | | | |
|---|---|---|---|---|
| | Below Basic | Basic | Proficient | Advanced |
| | | Grade 4 | | |
| **Total** | **31** | **46** | **21** | **2** |
| Sex | | | | |
| Male | 32 | 45 | 21 | 2 |
| Female | 30 | 47 | 22 | 1 |
| Race-ethnicity | | | | |
| White | 21 | 50 | 27 | 2 |
| Black | 52 | 40 | 7 | 1 |
| Hispanic | 57 | 35 | 8 | — |
| Asian/Pacific Islander | 29 | 44 | 24 | 3 |
| American Indian/Alaskan Native | 46 | 40 | 14 | 0 |
| | | Grade 8 | | |
| **Total** | **30** | **48** | **21** | **2** |
| Sex | | | | |
| Male | 33 | 45 | 20 | 2 |
| Female | 27 | 51 | 21 | 1 |
| Race-ethnicity | | | | |
| White | 20 | 51 | 26 | 2 |
| Black | 50 | 43 | 7 | — |
| Hispanic | 55 | 36 | 8 | — |
| Asian/Pacific Islander | 29 | 46 | 23 | 3 |
| American Indian/Alaskan Native | 51 | 39 | 11 | — |
| | | Grade 12 | | |
| **Total** | **35** | **39** | **22** | **4** |
| Sex | | | | |
| Male | 38 | 35 | 21 | 5 |
| Female | 32 | 42 | 22 | 3 |
| Race-ethnicity | | | | |
| White | 27 | 41 | 27 | 5 |
| Black | 58 | 33 | 8 | 1 |
| Hispanic | 56 | 33 | 10 | 1 |
| Asian/Pacific Islander | 34 | 37 | 23 | 5 |
| American Indian/Alaskan Native | 56 | 36 | 8 | 1 |

— Percentage is less than 0.5

NOTE: Percentages may not add to 100 due to rounding. See *Supplemental Note 3* for information on the racial-ethnic categories. See *Supplemental Note 6* for information on the National Assessment of Educational Progress (NAEP).

SOURCE: U.S. Department of Education, NCES. *NAEP 1998 Civics Report Card for the Nation: Findings from the National Assessment of Educational Progress* (NCES 2000–457), 1999.

# Civic Activities of Students: News Attentiveness

**Table 21-1** **Percentage of students in grades 6–12 who reported reading, watching or listening to, and/or discussing the news with their parents almost daily, by sex, race-ethnicity, and coursetaking: 1998**

| Type of civic activity and coursetaking | Total | Sex | | Race-ethnicity | | | |
|---|---|---|---|---|---|---|---|
| | | Male | Female | White | Black | Hispanic | Other |
| **Students in grades 6–12** | | | | | | | |
| Read national news stories | 11.6 | 13.5 | 9.6 | 11.9 | 11.2 | 10.7 | 11.4 |
| Watch/listen to national news | 42.0 | 44.5 | 39.4 | 39.7 | 48.6 | 45.2 | 40.7 |
| Discuss national news with parents | 7.1 | 7.6 | 6.6 | 6.4 | 26.0 | 8.6 | 7.1 |
| Any of the above | 49.0 | 52.0 | 46.0 | 47.0 | 54.6 | 52.3 | 47.6 |
| **Students who took a course*** | | | | | | | |
| Read national news stories | 13.6 | 16.0 | 11.2 | 14.0 | 13.5 | 12.2 | 12.6 |
| Watch/listen to national news | 43.2 | 46.5 | 39.9 | 41.3 | 50.4 | 44.8 | 40.6 |
| Discuss national news with parents | 7.9 | 8.8 | 7.1 | 7.3 | 9.4 | 9.6 | 6.9 |
| Any of the above | 51.2 | 55.4 | 47.0 | 49.8 | 56.1 | 53.2 | 48.5 |
| **Students who did not take a course*** | | | | | | | |
| Read national news stories | 6.6 | 7.5 | 5.7 | 6.3 | 5.1 | 8.4 | 8.2 |
| Watch/listen to national news | 39.1 | 40.0 | 38.3 | 35.5 | 44.1 | 45.9 | 40.8 |
| Discuss national news with parents | 5.1 | 4.9 | 5.3 | 3.9 | 6.6 | 7.2 | 7.5 |
| Any of the above | 43.9 | 44.3 | 43.4 | 39.7 | 50.7 | 51.1 | 45.1 |

* In 1998, 70 percent of youth took a course that required the student to pay attention to government, politics, or national issues, while 30 percent did not.

NOTE: See *Supplemental Note 2* for information on the National Household Education Survey (NHES). See *Supplemental Note 3* for information on the racial-ethnic categories.

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Youth Interview Component).

# Voting Participation

**Table 22-1　Voting rates and ratios of voting rates for the population ages 25–44, by highest level of educational attainment and type of election: Selected years 1964–98**

| Type of election and year | Total[1] | Highest level of educational attainment: 1–3 years of high school | High school diploma or GED | Some college | Bachelor's degree or higher |
|---|---|---|---|---|---|
| | | **Voting rates** | | | |
| Congressional elections | | | | | |
| 1974 | 42.2 | 24.7 | 41.9 | 49.7 | 59.3 |
| 1990 | 40.7 | 17.8 | 34.4 | 47.9 | 57.4 |
| 1994[2] | 39.4 | 13.1 | 30.7 | 45.9 | 57.5 |
| 1998 | 34.8 | 13.1 | 27.4 | 40.3 | 48.5 |
| Presidential elections | | | | | |
| 1964 | 69.0 | 60.5 | 75.5 | 82.9 | 86.2 |
| 1976 | 58.7 | 38.5 | 57.8 | 67.4 | 78.5 |
| 1988 | 54.0 | 26.3 | 47.4 | 61.7 | 75.0 |
| 1992 | 58.3 | 27.0 | 49.8 | 66.9 | 78.5 |
| 1996 | 49.2 | 20.2 | 40.0 | 56.8 | 68.0 |
| | | **Ratio of voting rate to that of high school graduates** | | | |
| Congressional elections | | | | | |
| 1974 | — | 0.590 | 1.000 | 1.186 | 1.415 |
| 1990 | — | 0.517 | 1.000 | 1.393 | 1.670 |
| 1994[2] | — | 0.427 | 1.000 | 1.495 | 1.873 |
| 1998 | — | 0.477 | 1.000 | 1.467 | 1.768 |
| Presidential elections | | | | | |
| 1964 | — | 0.801 | 1.000 | 1.098 | 1.142 |
| 1976 | — | 0.667 | 1.000 | 1.166 | 1.359 |
| 1988 | — | 0.555 | 1.000 | 1.301 | 1.582 |
| 1992 | — | 0.543 | 1.000 | 1.344 | 1.578 |
| 1996 | — | 0.506 | 1.000 | 1.421 | 1.702 |

— Not applicable

[1] Includes those with less than 9 years of education.

[2] Revised from previously published figures.

NOTE: In 1992, the Current Population Survey (CPS) changed the questions used to obtaain educational attainment. See *Supplemental Note 1* for more information. To minimize the impact of age on voting trends, this analysis is confined to individuals ages 25–44. The voting rate is calculated as the numbber of voters ages 25–44 divided by the total of individuals, both non-U.S. and U.S. citizens, in the age group.

SOURCE: U.S. Department of Commerce, Bureau of the Census. *Current Population Reports*, "Voting and Registration in the Election of November (various years)," series P-20, Nos. 143, 293, 322, 440, 453, 466, PPL-25, P20-504, and P25-1132.

# Voting Participation

**Table 22-2** **Percentage of 18- to 24-year-olds who reported voting and being registered to vote, by sex, race-ethnicity, and enrollment status: November 1998**

| Enrollment status | Total | Sex |  | Race-ethnicity |  |  |
|---|---|---|---|---|---|---|
|  |  | Male | Female | White | Black | Hispanic |
|  |  |  | Reported voting |  |  |  |
| **Total** | **18.5** | **17.6** | **19.3** | **19.5** | **16.9** | **14.7** |
| Enrolled in high school | 11.4 | 10.6 | 12.4 | 14.1 | 8.4 | 5.4 |
| Enrolled in college | 24.2 | 23.4 | 24.9 | 25.1 | 20.6 | 24.1 |
| Full time | 23.7 | 22.5 | 24.9 | 24.1 | 20.3 | 28.7 |
| Part time | 26.7 | 28.2 | 25.3 | 30.8 | 22.2 | 12.1 |
| Not enrolled in school | 15.6 | 15.0 | 16.1 | 16.0 | 16.6 | 12.2 |
| 18–20 years old | 10.3 | 10.4 | 10.1 | 11.7 | 8.9 | 5.8 |
| 21–24 years old | 18.0 | 17.3 | 18.7 | 17.9 | 20.5 | 16.1 |
|  |  |  | Reported being registered to vote |  |  |  |
| **Total** | **43.6** | **40.9** | **46.1** | **45.9** | **40.6** | **36.4** |
| Enrolled in high school | 23.1 | 21.5 | 25.3 | 25.5 | 22.7 | 15.9 |
| Enrolled in college | 52.2 | 51.1 | 53.3 | 54.8 | 45.5 | 48.0 |
| Full time | 52.2 | 50.7 | 53.6 | 54.6 | 44.4 | 50.3 |
| Part time | 52.4 | 52.9 | 51.8 | 56.3 | 50.4 | 41.9 |
| Not enrolled in school | 40.3 | 37.2 | 43.3 | 41.5 | 41.4 | 34.4 |
| 18–20 years old | 27.5 | 25.3 | 29.5 | 28.9 | 27.9 | 21.8 |
| 21–24 years old | 46.3 | 43.3 | 49.1 | 46.9 | 48.4 | 42.2 |

NOTE: See *Supplemental Note 1* for information on the Current Population Survey (CPS). Included in the totals but not shown separately are other racial-ethnic groups; see *Supplemental Note 3* for more information on the racial-ethnic categories.

SOURCE: U.S. Department of Commerce, Bureau of the Census. *Current Population Reports*, unpublished tabulations from the *Voting and Registration Supplement*, 1998.

# Annual Earnings of Young Adults

Table 23-1 Median annual earnings (in constant 1999 dollars) of all wage and salary workers ages 25–34, by sex and educational attainment: 1970–98

| | Male | | | | Female | | | |
|---|---|---|---|---|---|---|---|---|
| Year | Grades 9–11 | High school | Some college | Bachelor's or higher | Grades 9–11 | High school | Some college | Bachelor's or higher |
| 1970 | $29,377 | $35,553 | $38,794 | $44,031 | $8,640 | $14,681 | $17,570 | $26,772 |
| 1971 | 30,048 | 35,755 | 37,703 | 43,775 | 9,724 | 15,156 | 17,369 | 28,408 |
| 1972 | 29,860 | 37,707 | 38,085 | 44,594 | 9,908 | 15,699 | 18,575 | 28,119 |
| 1973 | 31,538 | 38,070 | 37,869 | 44,153 | 10,767 | 15,421 | 19,652 | 27,494 |
| 1974 | 29,008 | 35,937 | 36,559 | 41,134 | 9,519 | 15,310 | 18,282 | 26,586 |
| 1975 | 26,023 | 33,222 | 35,509 | 38,808 | 9,837 | 15,305 | 18,968 | 26,379 |
| 1976 | 26,322 | 33,630 | 34,773 | 39,961 | 9,758 | 16,016 | 18,214 | 25,334 |
| 1977 | 26,109 | 33,851 | 34,636 | 39,859 | 10,190 | 16,283 | 19,955 | 24,935 |
| 1978 | 26,068 | 34,072 | 35,627 | 40,099 | 8,557 | 15,899 | 18,527 | 24,647 |
| 1979 | 25,377 | 33,430 | 35,291 | 38,755 | 11,313 | 16,055 | 19,156 | 24,947 |
| 1980 | 22,822 | 31,075 | 32,390 | 37,021 | 10,284 | 15,943 | 19,801 | 24,243 |
| 1981 | 21,238 | 28,943 | 30,831 | 37,455 | 9,527 | 15,542 | 19,145 | 23,985 |
| 1982 | 19,141 | 26,897 | 30,039 | 36,063 | 10,094 | 15,179 | 18,301 | 24,735 |
| 1983 | 18,972 | 27,053 | 30,612 | 36,601 | 10,206 | 15,350 | 19,034 | 25,594 |
| 1984 | 17,532 | 27,708 | 31,941 | 37,623 | 9,042 | 16,035 | 19,431 | 25,849 |
| 1985 | 18,776 | 26,657 | 31,662 | 39,958 | 10,082 | 16,087 | 18,957 | 27,157 |
| 1986 | 18,591 | 26,777 | 31,561 | 40,279 | 10,349 | 16,006 | 19,434 | 28,496 |
| 1987 | 19,657 | 27,186 | 30,789 | 40,409 | 11,040 | 16,391 | 20,495 | 29,201 |
| 1988 | 18,848 | 27,840 | 30,561 | 39,419 | 9,008 | 16,108 | 21,084 | 29,168 |
| 1989 | 18,934 | 27,144 | 30,473 | 39,357 | 9,717 | 15,508 | 20,444 | 29,903 |
| 1990 | 18,033 | 25,420 | 29,091 | 37,532 | 8,848 | 15,365 | 20,545 | 29,528 |
| 1991 | 15,945 | 24,747 | 28,229 | 37,773 | 9,593 | 15,043 | 19,878 | 28,573 |
| 1992 | 16,066 | 23,610 | 26,784 | 37,822 | 11,349 | 14,849 | 19,918 | 29,704 |
| 1993 | 15,683 | 23,457 | 26,348 | 36,799 | 8,621 | 14,687 | 19,273 | 29,279 |
| 1994 | 16,059 | 23,803 | 27,250 | 36,241 | 8,953 | 15,482 | 18,629 | 28,870 |
| 1995 | 17,277 | 23,440 | 26,033 | 36,353 | 9,135 | 14,856 | 18,977 | 28,391 |
| 1996 | 16,385 | 23,875 | 27,331 | 37,361 | 9,476 | 14,875 | 18,954 | 28,016 |
| 1997 | 17,610 | 24,800 | 27,544 | 37,184 | 9,951 | 15,756 | 19,184 | 30,033 |
| 1998 | 17,976 | 25,864 | 30,124 | 40,363 | 10,638 | 15,356 | 20,074 | 30,774 |

NOTE: The Current Population Survey (CPS) questions used to obtain educational attainment were changed in 1992. In 1994, the survey methodology for the CPS was changed and weights were adjusted. See *Supplemental Note 1* for more information. The Consumer Price Index (CPI) was used to adjust earnings into constant dollars; see *Supplemental Note 3* for more information.

SOURCE: U.S. Department of Commerce, Bureau of the Census. March Current Population Surveys, 1970–98.

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# Annual Earnings of Young Adults

Table 23-2 Ratio of median annual earnings of all wage and salary workers ages 25–34 whose highest education level was grades 9–11, some college, or a bachelor's degree or higher, compared with those with a high school diploma or GED, by sex: 1970–98

| | Grades 9–11 | | Some college | | Bachelor's degree or higher | |
|---|---|---|---|---|---|---|
| Year | Male | Female | Male | Female | Male | Female |
| 1970 | 0.83 | 0.59 | 1.09 | 1.20 | 1.24 | 1.82 |
| 1971 | 0.84 | 0.64 | 1.05 | 1.15 | 1.22 | 1.87 |
| 1972 | 0.79 | 0.63 | 1.01 | 1.18 | 1.18 | 1.79 |
| 1973 | 0.83 | 0.70 | 0.99 | 1.27 | 1.16 | 1.78 |
| 1974 | 0.81 | 0.62 | 1.02 | 1.19 | 1.14 | 1.74 |
| 1975 | 0.78 | 0.64 | 1.07 | 1.24 | 1.17 | 1.72 |
| 1976 | 0.78 | 0.61 | 1.03 | 1.14 | 1.19 | 1.58 |
| 1977 | 0.77 | 0.63 | 1.02 | 1.23 | 1.18 | 1.53 |
| 1978 | 0.77 | 0.54 | 1.05 | 1.17 | 1.18 | 1.55 |
| 1979 | 0.76 | 0.70 | 1.06 | 1.19 | 1.16 | 1.55 |
| 1980 | 0.73 | 0.65 | 1.04 | 1.24 | 1.19 | 1.52 |
| 1981 | 0.73 | 0.61 | 1.07 | 1.23 | 1.29 | 1.54 |
| 1982 | 0.71 | 0.66 | 1.12 | 1.21 | 1.34 | 1.63 |
| 1983 | 0.70 | 0.66 | 1.13 | 1.24 | 1.35 | 1.67 |
| 1984 | 0.63 | 0.56 | 1.15 | 1.21 | 1.36 | 1.61 |
| 1985 | 0.70 | 0.63 | 1.19 | 1.18 | 1.50 | 1.69 |
| 1986 | 0.69 | 0.65 | 1.18 | 1.21 | 1.50 | 1.78 |
| 1987 | 0.72 | 0.67 | 1.13 | 1.25 | 1.49 | 1.78 |
| 1988 | 0.68 | 0.56 | 1.10 | 1.31 | 1.42 | 1.81 |
| 1989 | 0.70 | 0.63 | 1.12 | 1.32 | 1.45 | 1.93 |
| 1990 | 0.71 | 0.58 | 1.14 | 1.34 | 1.48 | 1.92 |
| 1991 | 0.64 | 0.64 | 1.14 | 1.32 | 1.53 | 1.90 |
| 1992 | 0.68 | 0.76 | 1.13 | 1.34 | 1.60 | 2.00 |
| 1993 | 0.67 | 0.59 | 1.12 | 1.31 | 1.57 | 1.99 |
| 1994 | 0.67 | 0.58 | 1.14 | 1.20 | 1.52 | 1.86 |
| 1995 | 0.74 | 0.61 | 1.11 | 1.28 | 1.55 | 1.91 |
| 1996 | 0.69 | 0.64 | 1.14 | 1.27 | 1.56 | 1.88 |
| 1997 | 0.71 | 0.63 | 1.11 | 1.22 | 1.50 | 1.91 |
| 1998 | 0.70 | 0.69 | 1.16 | 1.31 | 1.56 | 2.00 |

NOTE: This ratio is most useful when compared with 1.0. For example, the ratio of 1.56 in 1998 for males whose highest education level was a bachelor's degree or higher means that they earned 56 percent more than males who had a high school diploma or GED. The ratio of 0.70 in 1998 for males whose highest education level was grades 9–11 means that they earned 30 percent less than males who had a high school diploma or GED. The Current Population Survey (CPS) questions used to obtain educational attainment were changed in 1992. In 1994, the survey methodology for the CPS was changed and weights were adjusted. See *Supplemental Note 1* for more information.

SOURCE: U.S. Department of Commerce, Bureau of the Census. March Current Population Surveys, 1970–98.

## Annual Earnings of Young Adults

**Table 23-3** **Ratio of median annual earnings of all male to all female wage and salary workers ages 25–34, by educational attainment: 1970–98**

| Year | Grades 9–11 | High school completer | Some college | Bachelor's degree or higher |
|---|---|---|---|---|
| 1970 | 3.40 | 2.42 | 2.21 | 1.64 |
| 1971 | 3.09 | 2.36 | 2.17 | 1.54 |
| 1972 | 3.01 | 2.40 | 2.05 | 1.59 |
| 1973 | 2.93 | 2.47 | 1.93 | 1.61 |
| 1974 | 3.05 | 2.35 | 2.00 | 1.55 |
| 1975 | 2.65 | 2.17 | 1.87 | 1.47 |
| 1976 | 2.70 | 2.10 | 1.91 | 1.58 |
| 1977 | 2.56 | 2.08 | 1.74 | 1.60 |
| 1978 | 3.05 | 2.14 | 1.92 | 1.63 |
| 1979 | 2.24 | 2.08 | 1.84 | 1.55 |
| 1980 | 2.22 | 1.95 | 1.64 | 1.53 |
| 1981 | 2.23 | 1.86 | 1.61 | 1.56 |
| 1982 | 1.90 | 1.77 | 1.64 | 1.46 |
| 1983 | 1.86 | 1.76 | 1.61 | 1.43 |
| 1984 | 1.94 | 1.73 | 1.64 | 1.46 |
| 1985 | 1.86 | 1.66 | 1.67 | 1.47 |
| 1986 | 1.80 | 1.67 | 1.62 | 1.41 |
| 1987 | 1.78 | 1.66 | 1.50 | 1.38 |
| 1988 | 2.09 | 1.73 | 1.45 | 1.35 |
| 1989 | 1.95 | 1.75 | 1.49 | 1.32 |
| 1990 | 2.04 | 1.65 | 1.42 | 1.27 |
| 1991 | 1.66 | 1.65 | 1.42 | 1.32 |
| 1992 | 1.42 | 1.59 | 1.34 | 1.27 |
| 1993 | 1.82 | 1.60 | 1.37 | 1.26 |
| 1994 | 1.79 | 1.54 | 1.46 | 1.26 |
| 1995 | 1.89 | 1.58 | 1.37 | 1.28 |
| 1996 | 1.73 | 1.61 | 1.44 | 1.33 |
| 1997 | 1.77 | 1.57 | 1.44 | 1.24 |
| 1998 | 1.69 | 1.68 | 1.50 | 1.31 |

NOTE: This ratio is most useful when compared with 1.0. For example, the ratio of 1.31 in 1998 for those whose highest education level was a bachelor's degree or higher means that males who had attained a bachelor's degree or higher earned 31 percent more than females with the same level of educational attainment. The Current Population Survey (CPS) questions used to obtain educational attainment were changed in 1992. In 1994, the survey methodology for the CPS was changed and weights were adjusted. See *Supplemental Note 1* for more information.

SOURCE: U.S. Department of Commerce, Bureau of the Census. March Current Population Surveys, 1970–98.

# Educational Plans

**Table 24-1 Percentage distribution of high school seniors according to reported plans for postsecondary education, by sex and program type: 1980, 1990, and 1997**

| | 1980 | | | 1990 | | | 1997 | | |
|---|---|---|---|---|---|---|---|---|---|
| **Postsecondary plans** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** |
| Attend a technical/vocational school | | | | | | | | | |
| Definitely will | 9.4 | 9.9 | 8.7 | 8.7 | 9.0 | 8.3 | 8.2 | 9.1 | 7.3 |
| Probably will | 17.5 | 19.2 | 15.8 | 15.2 | 16.4 | 13.8 | 13.9 | 16.3 | 11.7 |
| Definitely/probably won't | 73.1 | 70.9 | 75.5 | 76.1 | 74.5 | 78.0 | 77.9 | 74.5 | 81.0 |
| Graduate from a 2-year college program | | | | | | | | | |
| Definitely will | 11.8 | 9.6 | 13.6 | 16.3 | 13.9 | 18.6 | 16.2 | 13.9 | 18.3 |
| Probably will | 20.5 | 19.2 | 21.6 | 22.4 | 22.0 | 22.8 | 21.1 | 22.4 | 19.8 |
| Definitely/probably won't | 67.7 | 71.2 | 64.7 | 61.3 | 64.1 | 58.6 | 62.7 | 63.7 | 61.9 |
| Graduate from a 4-year college program | | | | | | | | | |
| Definitely will | 34.5 | 35.6 | 33.6 | 48.1 | 45.8 | 50.8 | 55.5 | 50.9 | 59.6 |
| Probably will | 22.4 | 23.5 | 21.3 | 22.2 | 24.0 | 20.5 | 21.8 | 23.4 | 20.4 |
| Definitely/probably won't | 43.2 | 41.0 | 45.0 | 29.7 | 30.2 | 28.8 | 22.7 | 25.7 | 20.0 |
| Attend graduate or professional school after college | | | | | | | | | |
| Definitely will | 10.6 | 11.5 | 9.8 | 15.2 | 14.2 | 16.4 | 20.7 | 17.2 | 23.9 |
| Probably will | 23.5 | 24.8 | 22.3 | 30.4 | 29.7 | 31.3 | 34.1 | 32.7 | 35.3 |
| Definitely/probably won't | 65.9 | 63.8 | 67.9 | 54.4 | 56.2 | 52.2 | 45.2 | 50.1 | 40.8 |

NOTE: Percentages may not add to 100.0 due to rounding. The response rates for this survey do not meet NCES standards. Students were asked how likely it was that they would participate in different types of postsecondary education. The response options were "definitely will," "probably will," "probably won't," and "definitely won't."

SOURCE: U.S. Department of Education, NCES. *Trends in Educational Equity for Girls and Women* (NCES 2000–030), 2000 (1980 and 1990 data); University of Michigan, Institute for Social Research, *Monitoring the Future Study* (1997 data).

# Attitudes About Mathematics

**Table 25-1 Percentage of students who agreed with statements about mathematics, by grade level and sex: 1990, 1992, and 1996**

| **Statement** | Grade 4 | | | Grade 8 | | | Grade 12 | | |
|---|---|---|---|---|---|---|---|---|---|
| **and year** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** |
| I like mathematics | | | | | | | | | |
| 1990 | 70 | 69 | 71 | 57 | 60 | 54 | 54 | 58 | 51 |
| 1992 | 71 | 72 | 71 | 57 | 59 | 55 | 51 | 53 | 49 |
| 1996 | 69 | 69 | 70 | 56 | 58 | 53 | 50 | 53 | 48 |
| I am good at mathematics | | | | | | | | | |
| 1990 | 64 | 68 | 60 | 62 | 66 | 57 | 58 | 63 | 53 |
| 1992 | 65 | 70 | 59 | 60 | 66 | 54 | 50 | 56 | 45 |
| 1996 | 66 | 70 | 61 | 63 | 68 | 59 | 53 | 59 | 47 |

SOURCE: U.S. Department of Education, NCES. National Assessment of Educational Progress (NAEP), 1990, 1992, and 1996.

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## First-Time Kindergartners' Approaches to Learning

Table 26-1 Percentage distribution of first-time kindergartners according to the frequency with which teachers reported they persist at tasks, are eager to learn new things, and pay attention well, by child and family characteristics: Fall 1998

| | Persist at tasks | | Eager to learn | | Pay attention | |
|---|---|---|---|---|---|---|
| Characteristic | Never/ sometimes | Often/ very often/ | Never/ sometimes | Often/ very often | Never/ sometimes | Often/ very often |
| **Total** | **29** | **71** | **25** | **75** | **34** | **66** |
| Sex | | | | | | |
| Male | 35 | 65 | 29 | 71 | 42 | 58 |
| Female | 22 | 78 | 22 | 78 | 26 | 74 |
| Mother's highest education level | | | | | | |
| Less than high school | 39 | 61 | 38 | 62 | 45 | 55 |
| High school diploma or equivalent | 30 | 70 | 28 | 72 | 36 | 64 |
| Some college, including vocational/technical | 27 | 73 | 22 | 78 | 32 | 68 |
| Bachelor's degree or higher | 21 | 79 | 17 | 83 | 25 | 75 |
| Child's race-ethnicity | | | | | | |
| White | 25 | 75 | 22 | 78 | 30 | 70 |
| Black | 38 | 62 | 34 | 66 | 45 | 55 |
| Asian | 19 | 81 | 20 | 80 | 29 | 71 |
| Hispanic | 33 | 67 | 30 | 70 | 38 | 62 |

NOTE: Percentages may not add to 100 due to rounding. See *Supplemental Note 3* for information on the racial-ethnic categories.

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

## Credits Earned in High School

Table 27-1 Average number of total and academic credits earned in high school, by race-ethnicity: Selected years 1982–98

| | Total credits earned | | | | Total academic credits earned | | | |
|---|---|---|---|---|---|---|---|---|
| Year | Total | White | Black | Hispanic | Total | White | Black | Hispanic |
| 1982 | 21.8 | 21.9 | 21.4 | 21.5 | 14.7 | 15.0 | 14.0 | 13.5 |
| 1987 | 23.1 | 23.2 | 22.5 | 22.9 | 16.0 | 16.0 | 15.3 | 15.3 |
| 1990 | 23.6 | 23.7 | 23.5 | 23.9 | 16.8 | 16.9 | 16.3 | 16.7 |
| 1992 | 24.0 | 24.0 | 23.7 | 24.0 | 17.5 | 17.6 | 17.0 | 17.1 |
| 1994 | 24.3 | 24.5 | 23.7 | 24.2 | 17.7 | 17.9 | 16.7 | 17.4 |
| 1998 | 25.2 | 25.2 | 24.8 | 25.4 | 18.0 | 18.1 | 17.2 | 17.7 |

NOTE: See *Supplemental Note 3* for information on the racial-ethnic categories.

SOURCE: U.S. Department of Education, NCES. High School and Beyond Longitudinal Study of 1980 Sophomores, "Second Follow-up" (HS&B:1980/1984); National Education Longitudinal Study of 1988 Eighth Graders, "High School Transcript Study" (NELS 1992); and 1987, 1990, 1994, and 1998 National Assessment of Educational Progress (NAEP) High School Transcript Studies.

## Event Dropout Rates, by Urbanicity

Table 28-1 Event dropout rates for 15- to 24-year-olds in grades 10–12, by urbanicity: 1990–98

| | | Urbanicity | | |
|---|---|---|---|---|
| Year | Total | Urban | Suburban | Rural |
| 1990 | 4.1 | 5.7 | 3.2 | 3.5 |
| 1991 | 4.0 | 5.7 | 3.0 | 4.1 |
| 1992 | 4.4 | 4.9 | 3.6 | 4.9 |
| 1993 | 4.5 | 5.2 | 3.3 | 4.9 |
| 1994 | — | — | — | — |
| 1995 | — | — | — | — |
| 1996 | 4.7 | 7.1 | 3.8 | 3.8 |
| 1997 | 4.3 | 5.7 | 3.6 | 3.8 |
| 1998 | 4.4 | 6.1 | 3.8 | 3.9 |

— Not available.

NOTE: See *Supplemental Note 3* for information on the urbanicity categories.

SOURCE: U.S. Department of Commerce, Bureau of the Census. October Current Population Survey, various years, special tabulations.

## Who Is Prepared for College

Table 30-1 Percentage distribution of 1992 high school graduates according to level of qualification for admission to a 4-year institution, by race-ethnicity

| | | College qualified* | | | | |
|---|---|---|---|---|---|---|
| Race-ethnicity | Marginally or unqualified | Total | Minimally | Somewhat | Highly | Very highly |
| **Total** | **35.5** | **64.5** | **16.6** | **15.9** | **18.2** | **13.8** |
| White | 31.9 | 68.2 | 16.1 | 16.6 | 20.3 | 15.2 |
| Black | 53.1 | 46.9 | 16.7 | 14.0 | 9.9 | 6.3 |
| Hispanic | 47.0 | 53.0 | 20.7 | 13.6 | 10.8 | 7.9 |
| Asian/Pacific Islander | 27.3 | 72.7 | 14.6 | 15.0 | 20.2 | 23.0 |
| American Indian/Alaskan Native | 55.2 | 44.8 | 22.2 | 15.8 | 5.9 | 1.0 |

*Four-year College Qualification Index based on high school GPA, senior class rank, NELS 1992 aptitude test, SAT or ACT scores, and curricular rigor. See *Supplemental Note 9* for more information on the College Qualification Index.

NOTE: Percentages may not add to totals due to rounding. See *Supplemental Note 3* for information on the racial-ethnic categories.

SOURCE: U.S. Department of Education, NCES. National Education Longitudinal Study of 1988 Eighth Graders, "Third Follow-up" (NELS 1988/1994).

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# Immediate Transition to College

**Table 32-1** **Percentage of high school completers who were enrolled in college the October after completing high school, by family income and race-ethnicity: October 1972–98**

| | | Family income[1] | | | | Race-ethnicity[2] | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Low | | Middle | High | White | Black | | Hispanic | |
| October | Total | Annual | 3-year average | Annual | Annual | Annual | Annual | 3-year average | Annual | 3-year average |
| 1972 | 49.2 | 26.1 | (3) | 45.2 | 63.8 | 49.7 | 44.6 | (3) | 45.0 | (3) |
| 1973 | 46.6 | 20.3 | (3) | 40.9 | 64.4 | 47.8 | 32.5 | 41.4 | 54.1 | 48.8 |
| 1974 | 47.6 | — | — | — | — | 47.2 | 47.2 | 40.5 | 46.9 | 53.1 |
| 1975 | 50.7 | 31.2 | (3) | 46.2 | 64.5 | 51.1 | 41.7 | 44.5 | 58.0 | 52.7 |
| 1976 | 48.8 | 39.1 | 32.3 | 40.5 | 63.0 | 48.8 | 44.4 | 45.3 | 52.7 | 53.6 |
| 1977 | 50.6 | 27.7 | 32.4 | 44.2 | 66.3 | 50.8 | 49.5 | 46.8 | 50.8 | 48.8 |
| 1978 | 50.1 | 31.4 | 29.8 | 44.3 | 64.0 | 50.5 | 46.4 | 47.5 | 42.0 | 46.1 |
| 1979 | 49.3 | 30.5 | 31.6 | 43.2 | 63.2 | 49.9 | 46.7 | 45.2 | 45.0 | 46.3 |
| 1980 | 49.3 | 32.5 | 32.2 | 42.5 | 65.2 | 49.8 | 42.7 | 44.0 | 52.3 | 49.6 |
| 1981 | 53.9 | 33.6 | 32.9 | 49.2 | 67.6 | 54.9 | 42.7 | 40.3 | 52.1 | 48.7 |
| 1982 | 50.6 | 32.8 | 33.6 | 41.7 | 70.9 | 52.7 | 35.8 | 38.8 | 43.2 | 49.4 |
| 1983 | 52.7 | 34.6 | 34.0 | 45.2 | 70.3 | 55.0 | 38.2 | 38.0 | 54.2 | 46.7 |
| 1984 | 55.2 | 34.5 | 36.3 | 48.4 | 74.0 | 59.0 | 39.8 | 39.9 | 44.3 | 49.3 |
| 1985 | 57.7 | 40.2 | 35.9 | 50.6 | 74.6 | 60.1 | 42.2 | 39.5 | 51.0 | 46.1 |
| 1986 | 53.8 | 33.9 | 36.8 | 48.5 | 71.0 | 56.8 | 36.9 | 43.5 | 44.0 | 42.3 |
| 1987 | 56.8 | 36.9 | 37.6 | 50.0 | 73.8 | 58.6 | 52.2 | 44.2 | 33.5 | 45.0 |
| 1988 | 58.9 | 42.5 | 42.4 | 54.7 | 72.8 | 61.1 | 44.4 | 49.7 | 57.1 | 48.5 |
| 1989 | 59.6 | 48.1 | 45.6 | 55.4 | 70.7 | 60.7 | 53.4 | 48.0 | 55.1 | 52.7 |
| 1990 | 60.1 | 46.7 | 44.8 | 54.4 | 76.6 | 63.0 | 46.8 | 48.9 | 42.7 | 52.5 |
| 1991 | 62.5 | 39.5 | 42.2 | 58.4 | 78.2 | 65.4 | 46.4 | 47.2 | 57.2 | 52.6 |
| 1992 | 61.9 | 40.9 | 43.6 | 57.0 | 79.0 | 64.3 | 48.2 | 50.0 | 55.0 | 58.2 |
| 1993 | 61.5 | 50.4 | 44.0 | 56.9 | 79.3 | 62.9 | 55.6 | 51.3 | 62.2 | 55.7 |
| 1994 | 61.9 | 41.0 | 41.2 | 57.8 | 78.4 | 64.5 | 50.8 | 52.4 | 49.1 | 55.0 |
| 1995 | 61.9 | 34.2 | 41.5 | 56.1 | 83.4 | 64.3 | 51.2 | 52.9 | 53.7 | 51.6 |
| 1996 | 65.0 | 48.6 | 47.1 | 62.7 | 78.0 | 67.4 | 56.0 | 55.4 | 50.8 | 57.6 |
| 1997 | 67.0 | 57.0 | 50.6 | 60.8 | 82.2 | 68.2 | 58.5 | 58.8 | 65.6 | 55.3 |
| 1998 | 65.6 | 46.4 | (3) | 64.9 | 77.3 | 68.5 | 61.9 | (3) | 47.4 | (3) |

— Not available. Data on family income were not available in 1974.

[1] Low income is the bottom 20 percent of all family incomes, high income is the top 20 percent of all family incomes, and middle income is the 60 percent in between. See *Supplemental Note 1* for more information.

[2] Included in the total but not shown separately are high school completers from other racial-ethnic groups; see *Supplemental Note 3* for more information on the racial-ethnic categories.

[3] Due to small sample sizes for the low income, black, and Hispanic categories, 3-year averages also were calculated for each category. For example, the 3-year average for blacks in 1973 is the average percentage of black high school completers ages 16–24 who were enrolled in college the October after completing high school in 1972, 1973, and 1974. Thus, 3-year averages cannot be calculated for 1972 and 1998 and for groups of 3 years in which some data are not available (e.g., 1973–75 for the low-income category). Three-year averages have been revised from previously published figures.

NOTE: Includes those ages 16–24 only. In 1994, the survey methodology for the Current Population Survey (CPS) was changed and weights were adjusted. See *Supplemental Note 1* for more information.

SOURCE: U.S. Department of Commerce, Bureau of the Census. October Current Population Surveys.

# Immediate Transition to College

**Table 32-2 Percentage of high school completers who were enrolled in college the October after completing high school, by parents' highest education level: October 1990–98**

| Parents' highest education level[1] | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|---|---|---|---|---|---|---|---|---|---|
| **Total** | **60.1** | **62.5** | **61.9** | **61.5** | **61.9** | **61.9** | **65.0** | **67.0** | **65.6** |
| Less than high school diploma | 33.9 | 42.6 | 33.1 | 47.1 | 43.0 | 27.3 | 45.0 | 51.4 | 49.8 |
| High school diploma or GED | 49.0 | 51.0 | 55.5 | 52.3 | 49.9 | 47.0 | 56.1 | 61.7 | 57.2 |
| Some college | 65.6 | 67.5 | 67.5 | 62.7 | 65.0 | 70.2 | 66.6 | 62.6 | 67.7 |
| Bachelor's degree or higher | 83.1 | 87.2 | 81.3 | 87.9 | 82.5 | 87.7 | 85.2 | 86.1 | 82.3 |
| Not available[2] | 47.7 | 42.1 | 38.0 | 42.0 | 43.1 | 30.8 | 45.6 | 51.3 | 50.1 |

[1] Parents' highest education level is defined as either the highest educational attainment of the two parents who reside with the student or, if only one parent is in the residence, the highest educational attainment of that parent; or when neither parent resides with the student, the highest educational attainment of the head of the household and his or her spouse.

[2] Parents' highest education level is not available for those who do not live with their parents and who are classified as the head of the household (not including those who live in college dormitories); and those whose parents' educational attainment was not reported. In 1998, approximately 12 percent of high school completers ages 16–24 were in this category.

NOTE: Includes those ages 16–24 only. The Current Population Survey (CPS) questions used to obtain educational attainment were changed in 1992. In 1994, the survey methodology for the CPS was changed and weights were adjusted. See *Supplemental Note 1* for more information.

SOURCE: U.S. Department of Commerce, Bureau of the Census. October Current Population Surveys.

# Immediate Transition to College

**Table 32-3** **Percentage of high school completers who were enrolled in college the October after completing high school, by sex and type of institution: October 1972–98**

| | Male | | | Female | | |
|---|---|---|---|---|---|---|
| October | Total | 2-year | 4-year | Total | 2-year | 4-year |
| 1972 | 52.7 | — | — | 46.0 | — | — |
| 1973 | 50.0 | 14.6 | 35.4 | 43.4 | 15.2 | 28.2 |
| 1974 | 49.4 | 16.6 | 32.8 | 45.9 | 13.9 | 32.0 |
| 1975 | 52.6 | 19.0 | 33.6 | 49.0 | 17.4 | 31.6 |
| 1976 | 47.2 | 14.5 | 32.7 | 50.3 | 16.6 | 33.8 |
| 1977 | 52.1 | 17.2 | 35.0 | 49.3 | 17.8 | 31.5 |
| 1978 | 51.1 | 15.6 | 35.5 | 49.3 | 18.3 | 31.0 |
| 1979 | 50.4 | 16.9 | 33.5 | 48.4 | 18.1 | 30.3 |
| 1980 | 46.7 | 17.1 | 29.7 | 51.8 | 21.6 | 30.2 |
| 1981 | 54.8 | 20.9 | 33.9 | 53.1 | 20.1 | 33.0 |
| 1982 | 49.1 | 17.5 | 31.6 | 52.0 | 20.6 | 31.4 |
| 1983 | 51.9 | 20.2 | 31.7 | 53.4 | 18.4 | 35.1 |
| 1984 | 56.0 | 17.7 | 38.4 | 54.5 | 21.0 | 33.5 |
| 1985 | 58.6 | 19.9 | 38.8 | 56.8 | 19.3 | 37.5 |
| 1986 | 55.8 | 21.3 | 34.5 | 51.9 | 17.3 | 34.6 |
| 1987 | 58.3 | 17.3 | 41.0 | 55.3 | 20.3 | 35.0 |
| 1988 | 57.1 | 21.3 | 35.8 | 60.7 | 22.4 | 38.3 |
| 1989 | 57.6 | 18.3 | 39.3 | 61.6 | 23.1 | 38.5 |
| 1990 | 58.0 | 19.6 | 38.4 | 62.2 | 20.6 | 41.6 |
| 1991 | 57.9 | 22.9 | 35.0 | 67.1 | 26.8 | 40.3 |
| 1992 | 60.0 | 22.1 | 37.8 | 63.8 | 23.9 | 40.0 |
| 1993 | 58.7 | 22.4 | 36.3 | 64.0 | 22.4 | 41.6 |
| 1994 | 60.6 | 23.0 | 37.5 | 63.2 | 19.1 | 44.1 |
| 1995 | 62.6 | 25.3 | 37.4 | 61.3 | 18.1 | 43.2 |
| 1996 | 60.1 | 21.5 | 38.5 | 69.7 | 24.6 | 45.1 |
| 1997 | 63.6 | 21.4 | 42.2 | 70.3 | 24.1 | 46.2 |
| 1998 | 62.4 | 24.4 | 38.0 | 69.1 | 24.3 | 44.8 |

— Not available. Data for type of institution were not collected until 1973.

NOTE: Includes those ages 16–24 only. In 1994, the survey methodology for the Current Population Survey (CPS) was changed and weights were adjusted; see *Supplemental Note 1* for more information. Details may not add to totals due to rounding.

SOURCE: U.S. Department of Commerce, Bureau of the Census. October Current Population Surveys.

# Remediation and Degree Completion

Table 34-1 Percentage distribution of postsecondary education students in degree-granting institutions, by type and amount of remedial coursework and degree completion: 1980–93

| | Type and amount of remedial coursework | | | | |
|---|---|---|---|---|---|
| Highest degree | Any reading | Two or fewer courses: mathematics only | Two or more courses but no reading courses (and not two mathematics courses) | Only one course, not mathematics or reading | No courses |
| Total | 100 | 100 | 100 | 100 | 100 |
| None | 66 | 55 | 57 | 45 | 44 |
| Associate's | 13 | 10 | 17 | 10 | 5 |
| Bachelor's or more | 21 | 35 | 26 | 45 | 51 |

NOTE: Higher education students were 1982 high school seniors who attended college by age 29–30. Students who attended only sub-baccalaureate vocational/technical schools are not included. See *Supplemental Note 10* for the definition of remedial courses. Percentages may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, NCES. High School and Beyond Longitudinal Study of 1980 Sophomores, "Postsecondary Education Transcript Study" (HS&B:So PETS).

Table 34-2 Percentage distribution of students who took any remedial reading or mathematics courses in college according to other remedial coursework taken: 1980–93

| | Number of additional remedial courses | | | | | | |
|---|---|---|---|---|---|---|---|
| Remedial courses | None | One | Two | Three | Four or more | Any remedial mathematics | Any remedial reading |
| Any remedial reading courses | 15.1 | 23.2 | 19.7 | 12.6 | 29.3 | 66.7 | — |
| Any remedial mathematics courses | 46.0 | 23.0 | 14.9 | 6.4 | 9.7 | — | 23.6 |

— Not applicable.

NOTE: See *Supplemental Note 10* for the definition of remedial courses. Percentages may not add to 100.0 due to rounding.

SOURCE: U.S. Department of Education, NCES. High School and Beyond Longitudinal Study of 1980 Sophomores, "Postsecondary Education Transcript Study" (HS&B:So PETS).

Table 34-3 Percentage distribution of postsecondary education students by type and amount of remedial coursework in college and types of degree-granting institutions attended: 1980–93

| | | | Type and amount of remedial coursework | | | | |
|---|---|---|---|---|---|---|---|
| Institution attended | Percentage of all students | Total | Any reading | Two or fewer courses: mathematics only | Two or more courses but no reading courses (and not two mathematics courses) | Only one course, not mathematics or reading | No courses |
| **Total** | **100** | **100** | **13** | **14** | **17** | **9** | **47** |
| 4-year only | 44 | 100 | 9 | 13 | 9 | 9 | 60 |
| 2-year only | 29 | 100 | 18 | 13 | 22 | 9 | 37 |
| 2-year and 4-year only | 18 | 100 | 12 | 19 | 24 | 9 | 36 |
| Other combinations* | 9 | 100 | 13 | 15 | 22 | 9 | 41 |

* Attendance at sub-baccalaureate vocational/technical school in addition to 2-year and/or 4-year institutions.

NOTE: Higher education students were 1982 high school seniors who attended college by age 29–30. Students who attended only sub-baccalaureate vocational/technical schools are not included. See *Supplemental Note 10* for the definition of remedial courses. Percentages may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, NCES. High School and Beyond Longitudinal Study of 1980 Sophomores, "Postsecondary Education Transcript Study" (HS&B:So PETS).

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# Degrees Earned by Women

**Table 37-1 Percentage of master's and doctoral degrees earned by women, by field of study: 1970–71 and 1996–97**

| | Master's degrees | | Doctoral degrees | |
|---|---|---|---|---|
| **Field of study** | **1970–71** | **1996–97** | **1970–71** | **1996–97** |
| **Total** | **40.1** | **56.9** | **14.3** | **40.8** |
| Health professions and related sciences | 55.3 | 78.6 | 16.5 | 56.0 |
| Education | 56.2 | 76.6 | 21.0 | 62.8 |
| Psychology | 40.6 | 73.2 | 24.0 | 66.7 |
| English language and literature/letters | 60.6 | 64.6 | 28.8 | 57.5 |
| Visual and performing arts | 47.4 | 57.9 | 22.2 | 50.5 |
| Communications | 34.6 | 64.2 | 13.1 | 48.3 |
| Biological/life sciences | 33.6 | 53.1 | 16.3 | 43.1 |
| Business management and administrative services | 3.9 | 38.9 | 2.8 | 29.1 |
| Social sciences and history | 28.5 | 47.0 | 13.9 | 37.9 |
| Mathematics | 27.1 | 40.8 | 7.6 | 24.1 |
| Agriculture and natural resources | 5.9 | 42.2 | 2.9 | 27.4 |
| Physical sciences | 13.3 | 32.6 | 5.6 | 23.0 |
| Computer and information sciences | 10.3 | 28.2 | 2.3 | 15.9 |
| Engineering | 1.1 | 18.3 | 0.6 | 12.3 |

NOTE: See *Supplemental Note 12* for information on the fields of study.

SOURCE: U.S. Department of Education, NCES. 1970–71 Higher Education General Information Survey (HEGIS), "Degrees and Other Formal Awards Conferred" surveys and 1996–97 Integrated Postsecondary Education Data System (IPEDS), "Completions" survey.

# Educational Attainment

**Table 38-1** **Percentage of 25- to 29-year-olds who have completed at least high school, by race-ethnicity and sex: March 1971–99**

| March | All |  |  | White |  |  | Black |  |  | Hispanic |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | Total* | Male | Female | Total* | Male | Female | Total* | Male | Female | Total* | Male | Female |
| 1971 | 77.7 | 79.1 | 76.5 | 81.7 | 83.0 | 80.5 | 58.8 | 56.7 | 60.5 | 48.3 | 51.3 | 45.7 |
| 1972 | 79.8 | 80.5 | 79.2 | 83.4 | 84.1 | 82.7 | 64.1 | 61.7 | 66.0 | 47.6 | 47.1 | 47.9 |
| 1973 | 80.2 | 80.6 | 79.8 | 84.0 | 84.2 | 83.9 | 64.1 | 63.2 | 64.9 | 52.3 | 54.2 | 50.6 |
| 1974 | 81.9 | 83.1 | 80.8 | 85.5 | 86.0 | 85.0 | 68.4 | 71.5 | 65.8 | 54.1 | 55.9 | 52.5 |
| 1975 | 83.1 | 84.5 | 81.7 | 86.6 | 88.0 | 85.2 | 71.1 | 72.3 | 70.1 | 53.1 | 52.2 | 53.9 |
| 1976 | 84.7 | 86.0 | 83.5 | 87.7 | 89.0 | 86.4 | 74.0 | 72.8 | 74.9 | 58.1 | 57.6 | 58.4 |
| 1977 | 85.4 | 86.6 | 84.2 | 88.6 | 89.2 | 88.0 | 74.5 | 77.5 | 72.0 | 58.0 | 61.9 | 54.6 |
| 1978 | 85.3 | 86.0 | 84.6 | 88.5 | 88.8 | 88.2 | 77.4 | 78.7 | 76.3 | 56.5 | 58.5 | 54.6 |
| 1979 | 85.6 | 86.3 | 84.9 | 89.2 | 89.8 | 88.5 | 74.7 | 74.0 | 75.3 | 57.1 | 55.5 | 58.6 |
| 1980 | 85.4 | 85.4 | 85.5 | 89.2 | 89.1 | 89.2 | 76.7 | 74.8 | 78.3 | 57.9 | 57.0 | 58.8 |
| 1981 | 86.3 | 86.5 | 86.1 | 89.8 | 89.7 | 89.9 | 77.6 | 78.8 | 76.6 | 59.8 | 59.1 | 60.4 |
| 1982 | 86.2 | 86.3 | 86.1 | 89.1 | 89.1 | 89.1 | 81.0 | 80.4 | 81.5 | 61.0 | 60.6 | 61.2 |
| 1983 | 86.0 | 86.0 | 86.0 | 89.3 | 89.3 | 89.3 | 79.5 | 79.0 | 79.9 | 58.4 | 57.8 | 58.9 |
| 1984 | 85.9 | 85.6 | 86.3 | 89.4 | 89.4 | 89.4 | 79.1 | 75.9 | 81.7 | 58.6 | 56.7 | 60.1 |
| 1985 | 86.2 | 85.9 | 86.4 | 89.5 | 89.2 | 89.9 | 80.5 | 80.6 | 80.5 | 61.0 | 58.6 | 63.1 |
| 1986 | 86.1 | 85.9 | 86.4 | 89.6 | 88.7 | 90.4 | 83.5 | 86.4 | 81.0 | 59.1 | 58.2 | 60.0 |
| 1987 | 86.0 | 85.5 | 86.4 | 89.4 | 88.9 | 90.0 | 83.5 | 84.5 | 82.6 | 59.8 | 58.6 | 61.0 |
| 1988 | 85.9 | 84.7 | 87.1 | 89.7 | 88.4 | 90.9 | 80.9 | 80.9 | 80.9 | 62.3 | 59.9 | 64.8 |
| 1989 | 85.5 | 84.4 | 86.5 | 89.3 | 88.2 | 90.4 | 82.3 | 80.5 | 83.8 | 61.0 | 61.0 | 61.1 |
| 1990 | 85.7 | 84.4 | 87.0 | 90.1 | 88.6 | 91.6 | 81.8 | 81.4 | 82.0 | 58.2 | 56.6 | 59.9 |
| 1991 | 85.4 | 84.9 | 85.8 | 89.8 | 89.2 | 90.5 | 81.8 | 83.6 | 80.1 | 56.7 | 56.4 | 57.2 |
| 1992 | 86.3 | 86.1 | 86.5 | 90.6 | 90.3 | 91.1 | 80.9 | 82.7 | 79.3 | 60.9 | 61.1 | 60.6 |
| 1993 | 86.7 | 86.0 | 87.4 | 91.2 | 90.7 | 91.8 | 82.7 | 84.8 | 80.8 | 60.9 | 58.2 | 63.9 |
| 1994 | 86.1 | 84.5 | 87.6 | 91.1 | 90.0 | 92.3 | 84.1 | 82.8 | 85.3 | 60.3 | 58.0 | 63.0 |
| 1995 | 86.9 | 86.3 | 87.4 | 92.5 | 92.0 | 93.0 | 86.8 | 88.4 | 85.3 | 57.2 | 55.7 | 58.7 |
| 1996 | 87.3 | 86.5 | 88.1 | 92.6 | 92.0 | 93.1 | 86.0 | 87.9 | 84.5 | 61.1 | 59.7 | 62.9 |
| 1997 | 87.4 | 85.8 | 88.9 | 92.9 | 91.7 | 94.0 | 86.9 | 85.8 | 87.8 | 61.8 | 59.2 | 64.8 |
| 1998 | 88.1 | 86.6 | 89.6 | 93.6 | 92.5 | 94.6 | 88.2 | 88.4 | 88.1 | 62.8 | 59.9 | 66.3 |
| 1999 | 87.8 | 86.1 | 89.5 | 93.0 | 91.9 | 94.1 | 88.7 | 88.2 | 89.2 | 61.6 | 57.4 | 65.9 |

* Included in totals but not shown separately are other racial-ethnic groups; see *Supplemental Note 3* for more information on the racial-ethnic categories.

NOTE: The Current Population Survey (CPS) questions used to obtain educational attainment were changed in 1992. In 1994 the survey methodology for the CPS was changed and weights were adjusted; see *Supplemental Note 1* for more information.

SOURCE: U.S. Department of Commerce, Bureau of the Census. March Current Population Surveys, various years.

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# Educational Attainment

**Table 38-2** **Percentage of 25- to 29-year-olds who have completed at least some college, by race-ethnicity and sex: March 1971–99**

| | All | | | White | | | Black | | | Hispanic | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| March | Total* | Male | Female | Total* | Male | Female | Total* | Male | Female | Total* | Male | Female |
| 1971 | 43.6 | 48.7 | 38.4 | 44.9 | 50.2 | 39.5 | 30.9 | 29.0 | 32.2 | 30.6 | 38.3 | 22.8 |
| 1972 | 45.1 | 50.7 | 39.5 | 46.3 | 52.3 | 40.2 | 33.3 | 31.7 | 34.6 | 32.1 | 37.2 | 28.3 |
| 1973 | 45.3 | 51.4 | 39.4 | 46.6 | 53.0 | 40.2 | 33.5 | 33.5 | 33.5 | 31.6 | 39.4 | 24.5 |
| 1974 | 48.9 | 53.8 | 44.1 | 50.4 | 55.6 | 45.2 | 35.4 | 36.9 | 34.1 | 39.2 | 44.1 | 34.5 |
| 1975 | 50.1 | 56.0 | 44.1 | 51.2 | 57.3 | 44.9 | 38.7 | 41.0 | 36.8 | 41.1 | 50.4 | 32.6 |
| 1976 | 52.1 | 58.2 | 46.0 | 53.8 | 60.1 | 47.4 | 37.2 | 40.5 | 34.7 | 36.3 | 42.3 | 31.2 |
| 1977 | 53.2 | 58.0 | 48.5 | 54.8 | 59.9 | 49.7 | 41.7 | 44.2 | 39.6 | 41.1 | 42.6 | 39.5 |
| 1978 | 54.4 | 59.3 | 49.6 | 55.9 | 61.4 | 50.3 | 44.9 | 45.2 | 44.4 | 43.6 | 47.2 | 40.1 |
| 1979 | 54.1 | 57.7 | 50.6 | 55.7 | 59.4 | 51.9 | 41.7 | 40.7 | 42.5 | 44.0 | 50.7 | 38.0 |
| 1980 | 52.3 | 55.8 | 49.0 | 53.8 | 57.3 | 50.3 | 42.3 | 43.6 | 41.3 | 39.9 | 45.5 | 34.7 |
| 1981 | 50.1 | 52.7 | 47.5 | 51.2 | 54.1 | 48.3 | 42.5 | 43.0 | 42.2 | 39.6 | 41.7 | 37.7 |
| 1982 | 49.9 | 51.5 | 48.3 | 50.7 | 52.2 | 49.1 | 45.8 | 47.4 | 44.6 | 39.6 | 40.6 | 38.7 |
| 1983 | 50.6 | 52.1 | 49.0 | 51.6 | 53.4 | 49.7 | 41.6 | 42.0 | 41.2 | 42.9 | 41.1 | 44.6 |
| 1984 | 50.1 | 50.9 | 49.3 | 51.0 | 51.7 | 50.3 | 41.6 | 41.6 | 41.7 | 45.6 | 47.5 | 44.0 |
| 1985 | 50.8 | 51.5 | 50.1 | 51.8 | 52.5 | 51.2 | 42.7 | 42.4 | 42.9 | 44.2 | 45.9 | 42.9 |
| 1986 | 51.0 | 51.4 | 50.8 | 52.3 | 52.8 | 51.8 | 43.4 | 41.5 | 45.2 | 42.9 | 42.8 | 43.0 |
| 1987 | 50.7 | 50.4 | 51.0 | 51.4 | 51.5 | 51.4 | 43.0 | 38.4 | 47.0 | 44.6 | 46.3 | 43.1 |
| 1988 | 50.8 | 51.6 | 50.1 | 51.8 | 52.4 | 51.2 | 41.2 | 42.9 | 39.7 | 44.9 | 44.3 | 45.6 |
| 1989 | 51.3 | 52.0 | 50.5 | 52.8 | 53.4 | 52.2 | 42.1 | 42.2 | 41.9 | 44.3 | 44.8 | 43.9 |
| 1990 | 52.0 | 51.8 | 52.1 | 53.6 | 53.4 | 53.8 | 44.1 | 43.0 | 45.0 | 40.1 | 40.4 | 39.8 |
| 1991 | 53.1 | 52.3 | 53.8 | 54.9 | 54.7 | 55.1 | 43.2 | 38.3 | 47.7 | 42.2 | 40.9 | 43.4 |
| 1992 | 56.7 | 56.0 | 57.4 | 58.8 | 58.3 | 59.2 | 44.7 | 42.3 | 46.9 | 46.8 | 44.5 | 49.6 |
| 1993 | 58.9 | 57.6 | 60.1 | 61.0 | 60.3 | 61.6 | 48.4 | 43.6 | 52.5 | 48.8 | 46.1 | 51.9 |
| 1994 | 60.5 | 58.9 | 62.0 | 62.7 | 61.0 | 64.3 | 49.6 | 48.7 | 50.3 | 51.5 | 48.3 | 55.0 |
| 1995 | 62.2 | 60.6 | 63.9 | 64.6 | 62.6 | 66.7 | 52.0 | 51.2 | 52.5 | 50.3 | 48.0 | 52.7 |
| 1996 | 64.7 | 63.1 | 66.3 | 67.0 | 65.5 | 68.4 | 55.9 | 54.5 | 57.1 | 50.9 | 47.0 | 55.6 |
| 1997 | 65.4 | 64.0 | 66.8 | 68.2 | 66.9 | 69.5 | 53.7 | 50.2 | 56.5 | 53.9 | 51.9 | 56.1 |
| 1998 | 65.6 | 63.0 | 68.1 | 68.5 | 66.2 | 70.8 | 56.6 | 52.9 | 59.7 | 51.7 | 48.9 | 54.7 |
| 1999 | 66.1 | 63.6 | 68.5 | 68.7 | 66.1 | 71.2 | 57.8 | 52.1 | 62.3 | 50.6 | 47.7 | 53.2 |

* Included in totals but not shown separately are other racial-ethnic groups; see *Supplemental Note 3* for more information on the racial-ethnic categories.

NOTE: Included in the category "high school completers with some college" are those with a bachelor's degree or higher. The Current Population Survey (CPS) questions used to obtain educational attainment were changed in 1992. In 1994, the survey methodology for the CPS was changed and weights were adjusted; see *Supplemental Note 1* for more information.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys, various years.

# Educational Attainment

**Table 38-3** Percentage of 25- to 29-year-old high school completers with a bachelor's degree or higher, by race-ethnicity and sex: March 1971–99

| | All | | | White | | | Black | | | Hispanic | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| March | Total* | Male | Female | Total* | Male | Female | Total* | Male | Female | Total* | Male | Female |
| 1971 | 22.0 | 25.8 | 18.1 | 23.1 | 27.0 | 19.1 | 11.5 | 12.1 | 10.9 | 10.5 | 15.4 | 5.8 |
| 1972 | 23.7 | 27.3 | 20.2 | 24.9 | 28.6 | 21.1 | 13.1 | 11.6 | 14.3 | 7.8 | 9.5 | 6.4 |
| 1973 | 23.6 | 26.8 | 20.5 | 24.8 | 28.3 | 21.3 | 12.7 | 11.3 | 13.8 | 10.8 | 12.4 | 9.7 |
| 1974 | 25.3 | 28.7 | 21.8 | 27.2 | 31.1 | 23.2 | 11.5 | 12.3 | 11.0 | 10.1 | 8.9 | 11.2 |
| 1975 | 26.3 | 29.7 | 22.9 | 27.5 | 31.1 | 23.7 | 14.7 | 15.3 | 14.2 | 16.6 | 19.7 | 13.4 |
| 1976 | 28.0 | 32.0 | 24.1 | 29.3 | 33.5 | 25.0 | 17.6 | 16.5 | 18.6 | 12.7 | 17.9 | 8.2 |
| 1977 | 28.1 | 31.2 | 25.1 | 29.8 | 33.4 | 26.3 | 16.9 | 16.5 | 17.3 | 11.5 | 11.3 | 11.7 |
| 1978 | 27.3 | 30.2 | 24.4 | 28.9 | 32.6 | 25.3 | 15.2 | 13.6 | 16.5 | 17.1 | 16.4 | 17.9 |
| 1979 | 27.0 | 29.9 | 24.2 | 28.6 | 31.6 | 25.5 | 16.6 | 17.8 | 15.7 | 12.9 | 14.2 | 11.4 |
| 1980 | 26.3 | 28.1 | 24.5 | 28.0 | 30.1 | 26.0 | 15.0 | 14.0 | 15.8 | 13.2 | 15.0 | 11.8 |
| 1981 | 24.7 | 26.6 | 22.8 | 26.3 | 28.4 | 24.2 | 14.9 | 15.4 | 14.5 | 12.5 | 14.4 | 10.9 |
| 1982 | 25.2 | 26.9 | 23.4 | 26.7 | 28.8 | 24.6 | 15.6 | 14.6 | 16.4 | 15.9 | 17.8 | 14.2 |
| 1983 | 26.2 | 27.8 | 24.6 | 27.4 | 29.4 | 25.4 | 16.2 | 16.5 | 15.9 | 17.8 | 16.8 | 18.8 |
| 1984 | 25.5 | 27.1 | 24.0 | 27.0 | 28.5 | 25.4 | 14.8 | 17.1 | 13.0 | 18.1 | 17.0 | 19.2 |
| 1985 | 25.7 | 26.9 | 24.6 | 27.3 | 28.6 | 26.0 | 14.4 | 12.9 | 15.6 | 18.2 | 18.6 | 17.7 |
| 1986 | 26.0 | 26.7 | 25.3 | 28.1 | 29.1 | 27.1 | 14.2 | 11.9 | 16.3 | 15.3 | 15.4 | 15.2 |
| 1987 | 25.6 | 26.1 | 25.2 | 27.6 | 28.0 | 27.1 | 13.8 | 14.0 | 13.6 | 14.5 | 15.7 | 13.4 |
| 1988 | 26.4 | 27.6 | 25.2 | 28.0 | 29.1 | 26.9 | 14.8 | 15.3 | 14.4 | 18.1 | 19.8 | 16.3 |
| 1989 | 27.3 | 28.3 | 26.5 | 29.5 | 30.5 | 28.5 | 15.4 | 15.0 | 15.6 | 16.5 | 15.7 | 17.2 |
| 1990 | 27.1 | 28.0 | 26.2 | 29.3 | 30.0 | 28.6 | 16.4 | 18.6 | 14.5 | 14.0 | 12.9 | 15.2 |
| 1991 | 27.2 | 27.0 | 27.3 | 29.7 | 29.7 | 29.8 | 13.4 | 13.7 | 13.1 | 16.3 | 14.4 | 18.1 |
| 1992 | 27.3 | 26.9 | 27.8 | 30.0 | 29.5 | 30.4 | 13.7 | 14.2 | 13.2 | 15.6 | 14.3 | 17.0 |
| 1993 | 27.3 | 27.2 | 27.4 | 29.8 | 30.0 | 29.5 | 16.1 | 14.8 | 17.2 | 13.6 | 12.1 | 15.3 |
| 1994 | 27.0 | 26.6 | 27.4 | 29.7 | 29.8 | 29.6 | 16.2 | 14.0 | 17.9 | 13.3 | 11.3 | 15.5 |
| 1995 | 28.4 | 28.4 | 28.5 | 31.2 | 30.9 | 31.4 | 17.8 | 19.7 | 16.1 | 15.5 | 14.0 | 17.1 |
| 1996 | 31.1 | 30.2 | 32.0 | 34.1 | 33.6 | 34.7 | 17.0 | 13.9 | 19.6 | 16.4 | 17.1 | 15.6 |
| 1997 | 31.8 | 30.7 | 32.9 | 35.2 | 34.1 | 36.2 | 16.4 | 13.7 | 18.5 | 17.8 | 16.1 | 19.6 |
| 1998 | 31.0 | 29.6 | 32.4 | 34.5 | 32.9 | 36.1 | 17.9 | 16.1 | 19.3 | 16.5 | 15.9 | 17.1 |
| 1999 | 32.1 | 31.2 | 33.0 | 36.1 | 34.8 | 37.3 | 16.9 | 14.9 | 18.6 | 14.4 | 13.0 | 15.8 |

* Included in totals but not shown separately are other racial-ethnic groups; see *Supplemental Note 3* for information on the racial-ethnic categories.

NOTE: The Current Population Survey (CPS) questions used to obtain educational attainment were changed in 1992. In 1994, the survey methodology for the CPS was changed and weights were adjusted. See *Supplemental Note 1* for more information.

SOURCE: U.S. Department of Commerce, Bureau of the Census. March Current Population Surveys, various years.

## Coursetaking in Advanced Mathematics and Science

**Table 40-1** Percentage distribution of high school graduates according to the highest level of advanced mathematics and science courses taken: Selected years 1982–98

| | Mathematics | | | | | Science | | |
|---|---|---|---|---|---|---|---|---|
| | Middle academic | | Advanced academic | | | | | |
| Year | Level I | Level II | Level I | Level II | Level III | Chemistry I or Physics I | Chemistry I and Physics I | Chemistry II or Physics II |
| 1982 | 30.6 | 18.2 | 15.5 | 4.8 | 5.9 | 18.4 | 7.4 | 4.8 |
| 1987 | 26.8 | 23.1 | 12.9 | 9.0 | 7.6 | 23.3 | 11.8 | 5.1 |
| 1990 | 25.4 | 26.2 | 12.9 | 10.4 | 7.2 | 28.2 | 13.7 | 5.6 |
| 1992 | 22.7 | 26.4 | 16.4 | 10.9 | 10.7 | 29.9 | 14.3 | 6.9 |
| 1994 | 22.4 | 26.9 | 16.3 | 11.6 | 10.2 | 32.1 | 15.0 | 6.4 |
| 1998 | 20.8 | 27.7 | 14.4 | 15.2 | 11.8 | 33.8 | 18.5 | 7.3 |

NOTE: See *Supplemental Note 8* for definitions of the levels of mathematics and science courses. The placement of graduates in the various levels of mathematics and science courses is determined by the completion of at least one course at that level. Graduates who have completed coursework at more than one level (e.g., Mathematics Middle academic level II and Advanced academic level I) were placed into the higher level of coursework completed (i.e., Advanced academic level I). Graduates may achieve higher levels of coursework (e.g., Mathematics Advanced academic level III) without having taken courses at lower levels (e.g., Mathematics Middle academic level I).

SOURCE: U.S. Department of Education, NCES. High School and Beyond Longitudinal Study of 1980 Sophmores, "Second Follow-up" (HS&B 1980/1984), National Education Longitudinal Study of 1988 Eigth Graders, "High School Transcript Study" (NELS 1992), and 1982, 1987, 1990, 1992, 1994, 1998 National Assessment of Educational Progress (NAEP) High School Transcript Studies.

## Class Size of Kindergartens

**Table 41-1** Average size of kindergarten classrooms and percentage distribution, by class size and selected characteristics: Fall 1998

| | | Class size* | |
|---|---|---|---|
| Characteristic | Average class size | 15 or fewer students | More than 15 students |
| **Total** | 19 | 20 | 80 |
| Program type | | | |
| Full-day | 20 | 19 | 81 |
| Part-day | 18 | 22 | 78 |
| Control of school | | | |
| Public | 20 | 15 | 85 |
| Private | 18 | 41 | 59 |
| Percent minority | | | |
| Less than 10 | 19 | 30 | 70 |
| 10–24 | 19 | 19 | 81 |
| 25–49 | 19 | 18 | 88 |
| 50–75 | 19 | 20 | 80 |
| More than 75 | 20 | 14 | 86 |

* Percentages may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, NCES Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

# Interest Areas and Centers in Kindergarten Classrooms

Table 42-1 Percentage of kindergarten classrooms with interest areas or centers, by selected characteristics: Fall 1998

| Characteristic | Interest area or center | | | | |
|---|---|---|---|---|---|
| | Reading | Play | Mathematics | Writing | Science |
| **Total** | **99** | **98** | **95** | **89** | **67** |
| Program type | | | | | |
| Full-day | 99 | 98 | 95 | 90 | 68 |
| Part-day | 100 | 99 | 95 | 85 | 63 |
| Control of school | | | | | |
| Public | 100 | 99 | 97 | 91 | 66 |
| Private | 98 | 95 | 87 | 79 | 69 |
| Percent minority | | | | | |
| Less than 10 | 99 | 99 | 94 | 87 | 64 |
| 10–24 | 100 | 100 | 93 | 91 | 71 |
| 25–49 | 99 | 98 | 96 | 88 | 74 |
| 50–75 | 99 | 97 | 92 | 84 | 71 |
| More than 75 | 100 | 98 | 97 | 91 | 60 |

SOURCE: U.S. Department of Education, NCES, Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

# Student/Teacher Ratios

Table 43-1 Student/teacher ratios, by control and level of school: 1970–98

| Year | Total | | | Public | | | Private | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Elementary | Secondary | Total | Elementary | Secondary | Total | Elementary | Secondary |
| 1970 | 22.4 | 24.6 | 19.5 | 22.3 | 24.3 | 19.8 | 23.0 | 26.5 | 16.4 |
| 1971 | 22.4 | 25.0 | 19.1 | 22.3 | 24.9 | 19.3 | [1]22.6 | [1]25.7 | [1]16.7 |
| 1972 | 21.7 | 23.9 | 18.9 | 21.7 | 23.9 | 19.1 | [1]21.6 | [1]24.0 | [1]16.9 |
| 1973 | 21.3 | 23.0 | 19.1 | 21.3 | 23.0 | 19.3 | [1]21.2 | [1]23.6 | [1]16.5 |
| 1974 | 20.8 | 22.6 | 18.5 | 20.8 | 22.6 | 18.7 | [1]20.4 | [1]22.6 | [1]16.0 |
| 1975 | 20.3 | 21.7 | 18.6 | 20.4 | 21.7 | 18.8 | [1]19.6 | [1]21.5 | [1]15.7 |
| 1976 | 20.1 | 21.7 | 18.3 | 20.2 | 21.8 | 18.5 | 19.3 | 20.9 | 15.8 |
| 1977 | 19.6 | 20.9 | 17.9 | 19.7 | 21.1 | 18.2 | 18.4 | 20.0 | 15.1 |
| 1978 | 19.2 | 20.9 | 17.1 | 19.3 | 21.0 | 17.3 | 18.7 | 20.2 | 15.6 |
| 1979 | 19.0 | 20.5 | 17.0 | 19.1 | 20.6 | 17.2 | [1]18.1 | [1]19.7 | [1]14.8 |
| 1980 | 18.6 | 20.1 | 16.6 | 18.7 | 20.4 | 16.8 | 17.7 | 18.8 | 15.0 |
| 1981 | 18.7 | 20.0 | 16.8 | 18.8 | 20.3 | 16.9 | [1]17.6 | [1]18.6 | [1]15.2 |
| 1982 | 18.4 | 19.8 | 16.4 | 18.6 | 20.2 | 16.6 | [1]17.2 | [1]18.2 | [1]14.9 |
| 1983 | 18.2 | 19.6 | 16.2 | 18.4 | 19.9 | 16.4 | 17.0 | 18.0 | 14.4 |
| 1984 | 17.9 | 19.3 | 16.0 | 18.1 | 19.7 | 16.1 | [1]16.8 | [1]17.7 | [1]14.4 |
| 1985 | 17.6 | 19.1 | 15.6 | 17.9 | 19.5 | 15.8 | 16.2 | 17.1 | 14.0 |
| 1986 | 17.4 | 18.8 | 15.5 | 17.7 | 19.3 | 15.7 | [1]15.7 | [1]16.5 | [1]13.6 |
| 1987 | 17.3 | 18.8 | 15.0 | 17.6 | 19.3 | 15.2 | [1]15.5 | [1]16.5 | [1]13.1 |
| 1988 | 17.0 | 18.6 | 14.7 | 17.3 | 19.0 | 14.9 | [1]15.2 | [1]16.1 | [1]12.8 |
| 1989 | 16.8 | 18.4 | 14.3 | 17.2 | 19.0 | 14.6 | [1]14.2 | [1]15.1 | [1]11.7 |
| 1990 | 16.9 | 18.5 | 14.3 | 17.2 | 18.9 | 14.6 | [1]14.7 | [1]16.1 | [1]11.3 |
| 1991 | 17.0 | 18.4 | 14.6 | 17.3 | 18.8 | 15.0 | [1]14.6 | [1]16.0 | [1]11.1 |
| 1992 | 17.1 | 18.4 | 14.8 | 17.4 | 18.8 | 15.2 | [1]14.8 | [1]16.2 | [1]11.3 |
| 1993 | 17.1 | 18.5 | 14.7 | 17.4 | 18.9 | 15.1 | [1]14.9 | [1]16.3 | [1]11.5 |
| 1994 | 17.0 | 18.6 | 14.4 | 17.3 | 19.0 | 14.8 | [1]15.0 | [1]16.4 | [1]11.4 |
| 1995 | 17.0 | 18.9 | 14.0 | 17.3 | 19.3 | 14.4 | [1]14.9 | [1]16.6 | [1]10.8 |
| 1996 | 16.8 | 18.4 | 14.3 | 17.1 | 18.8 | 14.6 | [1]14.9 | [1]16.4 | [1]11.5 |
| 1997 | 16.6 | 18.3 | 14.0 | 16.8 | 18.6 | 14.2 | [2]15.1 | [2]16.6 | [2]11.6 |
| 1998 | [1]16.6 | [1]18.3 | [1]14.0 | [1]16.8 | [1]18.6 | [1]14.2 | [2]15.2 | [2]16.6 | [2]11.6 |

[1] Estimated

[2] Projected

NOTE: Data for teachers are expressed in full-time equivalent (FTE) units. Distribution of unclassified teachers by level is estimated. Distribution of elementary and secondary school teachers by level is determined by reporting units. Included in the totals and the elementary category are a small number of nursery school teachers and students.

SOURCE: U.S. Department of Education, NCES. Statistics of Public Elementary and Secondary Day Schools; Common Core of Data surveys; Private School Surveys; *Projections of Education Statistics to 2009* (NCES 1999–038), 1999; and *Digest of Education Statistics 1999* (NCES 2000–031), 2000.

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# Instructional Environments in 8th-Grade Mathematics

**Table 44-1 Percentage distribution of 8th-grade mathematics lessons containing task-controlled tasks, a combination of task- and solver-controlled tasks, or solver-controlled tasks, by country: 1994–95**

| | Country | | |
|---|---|---|---|
| **Locus of control*** | **United States** | **Germany** | **Japan** |
| All task-controlled | 83 | 48 | 17 |
| Task- and solver-controlled | 8 | 43 | 33 |
| All solver-controlled | 9 | 40 | 19 |

* A task-controlled teacher demonstrates a particular solution method to students and asks them to replicate that solution; a solver-controlled teacher encourages students to find alternative solution paths on their own.

NOTE: Percentages may not add to 100 due to rounding. See *Supplemental Note 7* for more information on the Third International Mathematics and Science Study (TIMSS).

SOURCE: U.S. Department of Education, NCES. *The TIMSS Videotape Classroom Study: Methods and Findings from an Exploratory Research Project on Eighth-Grade Mathematics Instruction in Germany, Japan, and the United States* (NCES 1999–074), 1999.

**Table 44-2 Percentage distribution of teachers responding to the question, "What was the main thing you wanted students to learn from today's lesson?," by country and response: 1994–95**

| | Country | | |
|---|---|---|---|
| **Questionnaire response*** | **United States** | **Germany** | **Japan** |
| Mathematical skills | 61 | 55 | 25 |
| Mathematical thinking | 21 | 31 | 73 |
| Social/motivational | 4 | 2 | 0 |
| Test preparation | 5 | 0 | 0 |
| Indeterminable | 9 | 13 | 2 |

*Mathematical skills = Teacher responses that emphasized the teaching of how to solve specific kinds of problems, use of standard formulas, etc.; Mathematical thinking = Teacher responses that emphasized students' exploration, development, and comprehension of mathematical concepts, or the discovery of multiple solutions to a problem; Social/motivational = Teacher responses that emphasized nonmathematical goals, such as "listening to others," or the creation of interest in some aspect of mathematics; Test preparation = Teacher responses that focused on preparing for an upcoming test; and Indeterminable = Teacher responses that were not possible to categorize, usually because they were too vague or incomplete.

NOTE: Percentages may not add to 100 due to rounding. See *Supplemental Note 7* for more information on the Third International Mathematics and Science Study (TIMSS).

SOURCE: U.S. Department of Education, NCES. *The TIMSS Videotape Classroom Study: Methods and Findings from an Exploratory Research Project on Eighth-Grade Mathematics Instruction in Germany, Japan, and the United States* (NCES 1999–074), 1999.

# Students' Use of the Internet

**Table 45-1** **Percentage of students in grades 1–12 who had potential access to a computer and used the Internet for various purposes at various locations, by race-ethnicity and family income: 1998**

| Accessibility, location of use, and reason for use at home | Total | Race-ethnicity[1] | | | Family income[2] | | |
|---|---|---|---|---|---|---|---|
| | | White | Black | Hispanic | Low | Middle | High |
| **Students who had potential access to** | | | | | | | |
| Computer in household | 57.6 | 70.1 | 27.7 | 28.4 | 21.2 | 53.7 | 87.7 |
| WEBTV in household | 1.3 | 1.5 | 0.8 | 0.9 | 0.3 | 1.2 | 2.1 |
| Anyone from household use Internet from home | 34.3 | 43.7 | 10.8 | 13.2 | 7.7 | 28.5 | 63.2 |
| **Students who used the Internet** | | | | | | | |
| At school | 78.4 | 82.7 | 70.1 | 70.5 | 68.4 | 77.9 | 85.5 |
| At home | 25.0 | 32.2 | 8.4 | 8.0 | 4.9 | 20.4 | 47.6 |
| Outside the home | 19.8 | 22.4 | 13.0 | 15.5 | 15.0 | 20.4 | 21.1 |
| At public library | 2.4 | 2.5 | 2.0 | 2.3 | 1.8 | 2.6 | 2.1 |
| At community center | 0.1 | 0.1 | 0 | 0.2 | 0.4 | 0.1 | ([3]) |
| At someone else's computer | 3.0 | 3.7 | 0.9 | 2.6 | 2.9 | 3.4 | 2.1 |
| **Purpose of Internet use at home is** | | | | | | | |
| E-mail | 14.9 | 19.6 | 3.5 | 4.4 | 2.8 | 11.7 | 29.3 |
| Contacting friends/family | 13.9 | 18.4 | 2.8 | 4.2 | 2.6 | 10.8 | 27.6 |
| Educational purposes | 5.8 | 7.5 | 1.0 | 2.0 | 1.1 | 4.4 | 12.1 |
| Hobbies | 3.8 | 5.0 | 1.1 | 0.8 | 0.6 | 2.9 | 8.0 |
| Educational courses/research for school | 19.3 | 25.1 | 6.4 | 6.1 | 4.0 | 15.2 | 37.5 |
| News, weather, sports | 5.3 | 6.9 | 1.8 | 1.8 | 0.8 | 4.2 | 10.3 |
| Search for information | 9.2 | 11.8 | 2.9 | 3.3 | 1.8 | 7.3 | 18.1 |
| Games, entertainment, fun | 1.9 | 2.6 | 0.2 | 0.5 | 0.4 | 1.7 | 3.4 |

[1] Included in the total but not shown separately are students from other racial-ethnic groups; see *Supplemental Note 3* for more information on the racial-ethnic categories.

[2] Low income is the bottom 20 percent of all family incomes, high income is the top 20 percent of all family incomes, and middle income is the 60 percent in between. See *Supplemental Note 1* for more information.

[3] Value less than 0.05 percent.

NOTE: Analysis includes only those students in grades 1–12 who were ages 5–18. See *Supplemental Note 1* for information on the Current Population Survey (CPS).

SOURCE: U.S. Department of Commerce, Bureau of the Census. December and October Current Population Surveys, 1998.

**Table 45-2** **Percentage of students in grades 1–12 who named various reasons for Internet use as the most important: 1998**

| Reasons for Internet use | First most important use | Second most important use | Third most important use |
|---|---|---|---|
| E-mail | 53.3 | 3.1 | 3.2 |
| Educational courses/research for school | 35.1 | 56.4 | 4.4 |
| News, weather, sports | 1.7 | 10.1 | 19.5 |
| Phone calls | 0.4 | 1.2 | 3.3 |
| Search for information | 3.5 | 18.7 | 41.7 |
| Search for jobs | 0.1 | (*) | 1.7 |
| Job-related tasks | (*) | 0.2 | 0.6 |
| Shop, pay bills, or other commercial activities | 0.1 | 0.6 | 2.2 |
| Other | 2.8 | 3.5 | 8.6 |
| Games, entertainment, fun | 1.6 | 2.6 | 6.0 |

* Value less than 0.05.

NOTE: Analysis includes only those students in grades 1–12 who were ages 5–18. See *Supplemental Note 1* for information on the Current Population Survey (CPS).

SOURCE: U.S. Department of Commerce, Bureau of the Census. December and October Current Population Surveys, 1998.

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# School Choice and Parental Satisfaction

Table 46-1 **Percentage distribution of students in grades 3–12 who attended a chosen or assigned school, by child's race-ethnicity, parents' highest education level, and household income: 1993, 1996, and 1999**

| Child's race-ethnicity, parents' highest education level, and household income | 1993* | | | 1996 | | | 1999 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Public | | | Public | | | Public | | |
| | Assigned | Chosen | Private | Assigned | Chosen | Private | Assigned | Chosen | Private |
| **Total** | **80.3** | **10.9** | **8.8** | **76.9** | **13.3** | **9.9** | **75.8** | **14.2** | **10.0** |
| Race-ethnicity | | | | | | | | | |
| White | 81.4 | 8.5 | 10.2 | 78.0 | 10.7 | 11.3 | 76.7 | 11.4 | 12.0 |
| Black | 77.4 | 18.9 | 3.7 | 74.2 | 20.8 | 5.1 | 71.8 | 22.3 | 5.9 |
| Hispanic | 79.7 | 13.6 | 6.7 | 76.4 | 16.1 | 7.5 | 76.7 | 18.2 | 5.1 |
| Other | 73.4 | 14.5 | 12.1 | 70.4 | 18.6 | 11.1 | 74.2 | 16.5 | 9.3 |
| Parents' highest education level | | | | | | | | | |
| Less than high school diploma | 84.4 | 13.3 | 2.3 | 79.1 | 17.4 | 3.5 | 78.6 | 18.8 | 2.6 |
| High school diploma or GED | 83.6 | 11.2 | 5.2 | 83.0 | 11.6 | 5.4 | 80.0 | 14.5 | 5.6 |
| Some college/technical/ vocational school | 80.1 | 11.1 | 8.8 | 77.0 | 14.6 | 8.4 | 77.6 | 15.3 | 7.1 |
| Bachelor's degree | 76.9 | 8.7 | 14.3 | 71.4 | 13.4 | 15.3 | 72.2 | 12.3 | 15.5 |
| Graduate/advanced degree | 73.1 | 9.9 | 16.9 | 68.3 | 11.3 | 20.4 | 68.9 | 11.9 | 19.2 |
| Household income | | | | | | | | | |
| $10,000 or less | 82.9 | 14.0 | 3.0 | 76.6 | 19.5 | 3.9 | 73.2 | 22.5 | 4.3 |
| 10,001–20,000 | 82.3 | 13.9 | 3.8 | 80.0 | 15.3 | 4.7 | 77.2 | 17.7 | 5.1 |
| 20,001–35,000 | 81.8 | 10.6 | 7.7 | 78.7 | 14.0 | 7.4 | 78.6 | 15.8 | 5.6 |
| 35,001–50,000 | 80.4 | 9.7 | 9.9 | 78.0 | 11.9 | 10.1 | 77.0 | 13.6 | 9.4 |
| 50,001 or more | 75.9 | 8.5 | 15.6 | 73.6 | 10.2 | 16.3 | 74.2 | 10.4 | 15.5 |

* Data are revised from previously published figures.

NOTE: Ungraded students and homeschoolers were excluded from the estimate. Percentages may not add to 100.0 due to rounding. See *Supplemental Note 2* for information on the National Household Education Survey (NHES). See *Supplemental Note 3* for information on the racial-ethnic categories.

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1993 (School Safety and Discipline Component), 1996 (Parent Interview Component), and 1999 (Parent Interview Component).

# School Choice and Parental Satisfaction

**Table 46-2 Percentage of students in grades 3–12 with parents who were very satisfied with aspects of their child's school, by school choice type, grade level, and race-ethnicity: 1993 and 1999**

| School, grade level, | School | | Teacher | | Academic standards | | Discipline | |
|---|---|---|---|---|---|---|---|---|
| and race-ethnicity | 1993 | 1999 | 1993 | 1999 | 1993 | 1999 | 1993 | 1999 |
| **Total** | **55.9** | **52.7** | **58.3** | **56.6** | **58.4** | **56.8** | **58.5** | **58.3** |
| | | | | **Public-Assigned** | | | | |
| **Total** | **52.3** | **47.7** | **56.0** | **53.2** | **55.0** | **52.5** | **55.1** | **53.9** |
| Grade level | | | | | | | | |
| Grades 3–5 | 60.6 | 57.0 | 67.1 | 67.5 | 59.4 | 57.0 | 62.7 | 63.9 |
| Grades 6–8 | 48.3 | 46.3 | 53.2 | 50.3 | 52.9 | 52.7 | 52.3 | 53.4 |
| Grades 9–12 | 48.7 | 41.6 | 49.0 | 44.4 | 53.2 | 48.8 | 51.2 | 46.5 |
| Race-ethnicity | | | | | | | | |
| White | 53.4 | 47.2 | 56.3 | 52.4 | 56.4 | 51.5 | 56.1 | 52.5 |
| Black | 45.8 | 44.8 | 52.5 | 50.3 | 48.6 | 51.2 | 50.7 | 52.4 |
| Hispanic | 55.7 | 54.6 | 58.2 | 61.2 | 55.3 | 59.8 | 55.1 | 62.4 |
| | | | | **Public-Chosen** | | | | |
| **Total** | **61.2** | **61.6** | **61.5** | **61.6** | **63.0** | **63.1** | **63.0** | **62.7** |
| Grade level | | | | | | | | |
| Grades 3–5 | 68.5 | 66.6 | 70.2 | 71.2 | 66.3 | 67.6 | 72.6 | 70.8 |
| Grades 6–8 | 59.6 | 63.9 | 61.5 | 62.4 | 62.0 | 65.9 | 61.6 | 63.8 |
| Grades 9–12 | 55.7 | 56.6 | 53.7 | 54.1 | 60.7 | 58.3 | 55.6 | 56.2 |
| Race-ethnicity | | | | | | | | |
| White | 63.4 | 61.3 | 64.8 | 61.6 | 64.7 | 62.1 | 64.9 | 61.6 |
| Black | 58.4 | 62.2 | 54.2 | 63.6 | 62.5 | 66.1 | 62.2 | 63.2 |
| Hispanic | 59.4 | 65.7 | 63.5 | 63.2 | 61.8 | 67.2 | 60.9 | 68.1 |
| | | | | | **Private** | | | |
| **Total** | **82.5** | **78.4** | **75.2** | **75.3** | **83.4** | **81.1** | **84.4** | **85.3** |
| Grade level | | | | | | | | |
| Grades 3–5 | 83.8 | 79.7 | 75.6 | 81.3 | 84.4 | 79.4 | 86.9 | 85.3 |
| Grades 6–8 | 82.6 | 79.0 | 76.5 | 72.9 | 83.3 | 82.0 | 83.9 | 83.8 |
| Grades 9–12 | 81.2 | 76.5 | 73.8 | 71.3 | 82.4 | 81.9 | 82.3 | 86.7 |
| Race-ethnicity | | | | | | | | |
| White | 82.6 | 81.4 | 74.8 | 77.9 | 83.6 | 82.6 | 83.9 | 87.2 |
| Black | 77.2 | 59.5 | 76.5 | 60.7 | 78.7 | 74.1 | 84.0 | 71.2 |
| Hispanic | 81.8 | 75.2 | 81.9 | 73.4 | 83.1 | 77.7 | 87.1 | 83.4 |

NOTE: Includes those who responded "very satisfied" from a scale of "very satisfied," "somewhat satisfied," "somewhat dissatisfied," and "very dissatisfied." Ungraded students and homeschoolers were excluded from the estimate. See *Supplemental Note 2* for more information on the National Household Education Survey (NHES). See *Supplemental Note 3* for information on the racial-ethnic categories.

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1993 (School Safety and Discipline Component), and 1999 (Parent Interview Component).

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# Preparation and Qualifications of Public School Teachers

**Table 47-1 Percentage of full-time public school teachers who held various degrees and certificates, by teacher and school characteristics: 1998**

| Teacher or school characteristic | Degrees and certificates | | | | |
|---|---|---|---|---|---|
| | Bachelor's degree | Master's degree | Doctor's degree | Other degree | Other certificate |
| **Total**[1] | **[2]100** | **45** | **1** | **1** | **5** |
| Years of teaching experience | | | | | |
| 3 or fewer years | [2]100 | 16 | 1 | 2 | 4 |
| 4–9 years | 100 | 31 | (3) | 1 | 3 |
| 10–19 years | 100 | 48 | 1 | 1 | 5 |
| 20 or more years | 100 | 62 | 2 | 1 | 6 |
| School instructional level | | | | | |
| Elementary school | 100 | 40 | 1 | 1 | 4 |
| Middle school | [2]100 | 46 | 1 | 2 | 5 |
| High school | 100 | 55 | 2 | 1 | 5 |
| Combined | 100 | 49 | 3 | (3) | 7 |
| School enrollment size | | | | | |
| Less than 300 | 100 | 37 | 0 | 1 | 6 |
| 300–499 | 100 | 47 | 1 | 1 | 5 |
| 500–999 | 100 | 42 | 1 | 1 | 4 |
| 1,000 or more | [2]100 | 54 | 2 | 1 | 5 |
| Region[4] | | | | | |
| Northeast | [2]100 | 60 | 2 | 1 | 6 |
| Midwest | 100 | 51 | (3) | 1 | 4 |
| South | [2]100 | 39 | 1 | 2 | 4 |
| West | 100 | 38 | 1 | 1 | 5 |
| Percentage minority enrollment | | | | | |
| 5 percent or less | 100 | 49 | (3) | 2 | 5 |
| 6–20 percent | 100 | 51 | 1 | 1 | 3 |
| 21–50 percent | 100 | 43 | 1 | 1 | 4 |
| More than 50 percent | [2]100 | 38 | 1 | 1 | 7 |
| Percentage of students eligible for free or reduced-price lunch | | | | | |
| Less than 15 percent | 100 | 57 | 2 | 1 | 4 |
| 15–32 percent | 100 | 46 | 1 | 1 | 5 |
| 33–59 percent | [2]100 | 41 | 1 | 2 | 4 |
| 60 percent or more | 100 | 37 | 1 | 1 | 6 |

[1] Includes full-time public school teachers who taught grades 1–12 whose main teaching assignment was in English/language arts, social studies/social sciences, foreign language, mathematics, or science, or who taught in a self-contained classroom.

[2] Estimate rounds to 100 percent.

[3] Estimate is less than 0.5 percent.

[4] See *Supplemental Note 4* for a list of states that comprise each region.

SOURCE: U.S. Department of Education, NCES. *Teacher Quality: A Report on the Preparation and Qualifications of Public School Teachers* (NCES 1999–080), 1999.

# Preparation and Qualifications of Public School Teachers

**Table 47-2 Percentage distribution of full-time public school teachers according to undergraduate or graduate majors in various fields of study, by teacher and school characteristics: 1998**

| Teacher or school characteristic | Major field of study<br>Academic field | <br>Subject area education[1] | <br>General education[2] | <br>Other education[3] |
|---|---|---|---|---|
| **Total[4]** | 38 | 18 | 37 | 7 |
| Years of teaching experience | | | | |
| 3 or fewer years | 50 | 11 | 37 | 2 |
| 4–9 years | 41 | 16 | 39 | 5 |
| 10–19 years | 32 | 20 | 37 | 11 |
| 20 or more years | 36 | 20 | 36 | 8 |
| School instructional level | | | | |
| Elementary school | 22 | 9 | 58 | 11 |
| Middle school | 44 | 22 | 27 | 7 |
| High school | 66 | 29 | 5 | 1 |
| Combined | 55 | 35 | 8 | 2 |

[1] "Subject area education" is the teaching of an academic field, such as mathematics education.

[2] "General education" includes the following fields: pre-elementary and early childhood education; elementary education; and secondary education.

[3] Examples of "other education" fields are special education, curriculum and instruction, and educational administration.

[4] Includes full-time public school teachers who taught grades 1–12 whose main teaching assignment was in English/language arts, social studies/social sciences, foreign language, mathematics, or science, or who taught in a self-contained classroom.

NOTE: Teachers with more than one major or degree were counted only once, with the field selected in the following order: academic field, subject area education, other education, and general education. Percentages may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, NCES. *Teacher Quality: A Report on the Preparation and Qualifications of Public School Teachers* (NCES 1999–080), 1999.

# Preparation and Qualifications of Public School Teachers

Table 47-3 Percentage distribution of full-time public school teachers, by various types of teaching certificates in their state and by teacher and school characteristics: 1998

| | Teachers in general elementary classrooms[1] | | | | | Teachers in departmentalized settings[2] | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Type of certificate | | | | | Type of certificate | | | | |
| Teacher or school characteristic | Regular or standard state certificate or advanced professional certificate | Provisional[3] | Probationary[4] | Temporary | Emergency or waiver | Regular or standard state certificate or advanced professional certificate | Provisional[3] | Probationary[4] | Temporary | Emergency or waiver |
| **Total[5]** | **93** | **3** | **2** | **1** | **1** | **92** | **4** | **2** | **1** | **1** |
| Years of teaching experience | | | | | | | | | | |
| 3 or fewer years | 65 | 11 | 11 | 8 | 4 | 64 | 13 | 12 | 5 | 6 |
| 4–9 years | 92 | 5 | 1 | 2 | (6) | 89 | 5 | 3 | 1 | (6) |
| 10–19 years | 99 | 1 | (6) | (6) | 0 | 97 | 1 | (6) | (6) | (6) |
| 20 or more years | 99 | 1 | 0 | 0 | 0 | 99 | 1 | (5) | 0 | 0 |
| School enrollment size | | | | | | | | | | |
| Less than 300 | 96 | 1 | 1 | 1 | (6) | 95 | 2 | 2 | 0 | 1 |
| 300–499 | 94 | 3 | 1 | 1 | (6) | 89 | 5 | 4 | 1 | 1 |
| 500–999 | 92 | 4 | 2 | 2 | 1 | 93 | 4 | 2 | 1 | 1 |
| 1,000 or more | 85 | 3 | 7 | 4 | 2 | 91 | 3 | 3 | 2 | 1 |
| Region[7] | | | | | | | | | | |
| Northeast | 91 | 5 | 1 | 3 | 0 | 90 | 5 | 4 | 1 | 0 |
| Midwest | 96 | 3 | (6) | 1 | 0 | 93 | 4 | 2 | 1 | 0 |
| South | 94 | 3 | 2 | 1 | (6) | 92 | 3 | 2 | 1 | 1 |
| West | 90 | 3 | 3 | 2 | 2 | 90 | 1 | 3 | 2 | 3 |
| Percentage minority enrollment | | | | | | | | | | |
| 5 percent or less | 96 | 2 | 1 | 2 | 0 | 92 | 3 | 3 | 1 | (6) |
| 6–20 percent | 95 | 3 | 1 | 1 | (6) | 94 | 3 | 2 | 1 | (6) |
| 21–50 percent | 93 | 3 | 2 | 1 | (6) | 93 | 3 | 2 | 1 | 1 |
| More than 50 percent | 88 | 5 | 3 | 2 | 2 | 87 | 5 | 3 | 2 | 3 |
| Percentage of students eligible for free or reduced-price lunch | | | | | | | | | | |
| Less than 15 percent | 94 | 3 | 1 | 2 | (6) | 92 | 3 | 3 | 1 | (6) |
| 15–32 percent | 95 | 3 | 1 | 1 | 0 | 93 | 3 | 2 | 2 | 1 |
| 33–59 percent | 95 | 2 | 1 | 1 | 1 | 94 | 3 | 2 | 1 | (6) |
| 60 percent or more | 90 | 4 | 3 | 2 | 1 | 87 | 5 | 3 | 2 | 3 |

[1] Includes all teachers who taught in self-contained classrooms, regardless of instructional level. The majority (95 percent) of self-contained classrooms were at the elementary school level. All teachers had a certificate.

[2] Includes certificates in teacher's main teaching assignment only. No more than 1 percent of teachers in any category had no certificate.

[3] Includes other types of certificates awarded while participating in an "alternate certification program."

[4] In some states, new teachers are by definition probationary.

[5] Includes full-time public school teachers who taught grades 1–12 whose main teaching assignment was in English/language arts, social studies/social sciences, foreign language, mathematics, or science, or who taught a self-contained classroom.

[6] Less than 0.5 percent.

[7] See *Supplemental Note 4* for a list of states that comprise each region.

NOTE: Percentages may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, NCES. *Teacher Quality: A Report on the Preparation and Qualifications of Public School Teachers* (NCES 1999–080), 1999.

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# Perceived Impact of Professional Development

**Table 48-1** **Percentage of full-time public school teachers who participated in the past 12 months in professional development activities that focused on various topics, by number of hours spent in development activity: 1998**

| | Any participation | | | |
|---|---|---|---|---|
| | | Total hours spent | | |
| **Focus of activity** | **Total** | **1–8** | **9–32** | **More than 32** |
| In-depth study in the subject area of your main teaching assignment | 73 | 32 | 24 | 17 |
| New methods of teaching (e.g., cooperative learning) | 77 | 47 | 21 | 8 |
| State or district curriculum and performance standards | 81 | 50 | 25 | 7 |
| Integration of educational technology in the grade or subject you teach | 78 | 49 | 22 | 7 |
| Student performance assessment | 67 | 47 | 15 | 5 |
| Classroom management, including student discipline | 49 | 38 | 8 | 3 |
| Addressing the needs of students with limited English proficiency or from diverse cultural backgrounds | 31 | 22 | 6 | 4 |
| Addressing the needs of students with disabilities | 48 | 39 | 6 | 2 |

NOTE: Percentages may not add to totals due to rounding.

SOURCE: U.S. Department of Education, NCES. *Teacher Quality: A Report on the Preparation and Qualifications of Public School Teachers* (NCES 1999–080), 1999.

# Age of School Buildings

**Table 49-1** **Mean age and percentage distribution of public schools according to year of school construction and condition of school, by selected school characteristics: 1994–96**

| School characteristic | Mean age | Year school was constructed: Before 1950 | 1950–69 | 1970–84 | 1985 or after | Condition of school[1]: Oldest | Moderate | Newest |
|---|---|---|---|---|---|---|---|---|
| **Total** | **42** | **26** | **46** | **19** | **10** | **29** | **61** | **10** |
| Instructional level | | | | | | | | |
| Elementary | 43 | 29 | 46 | 15 | 11 | 30 | 60 | 10 |
| Secondary | 40 | 24 | 46 | 23 | 8 | 28 | 65 | 7 |
| Enrollment size | | | | | | | | |
| Less than 300 | 48 | 40 | 39 | 14 | 8 | 36 | 58 | 6 |
| 300–999 | 40 | 24 | 48 | 17 | 11 | 27 | 62 | 11 |
| 1,000 or more | 39 | 23 | 44 | 22 | 11 | 25 | 64 | 12 |
| Metropolitan status | | | | | | | | |
| City | 46 | 34 | 44 | 13 | 9 | 32 | 57 | 11 |
| Urban fringe | 40 | 20 | 53 | 17 | 10 | 36 | 54 | 10 |
| Town | 40 | 24 | 47 | 20 | 9 | 22 | 71 | 7 |
| Rural | 42 | 32 | 38 | 17 | 12 | 28 | 61 | 11 |
| Region[2] | | | | | | | | |
| Northeast | 46 | 30 | 49 | 15 | 6 | 33 | 62 | 5 |
| Southeast | 37 | 23 | 43 | 20 | 14 | 21 | 68 | 11 |
| Central | 46 | 33 | 46 | 14 | 8 | 36 | 57 | 6 |
| West | 39 | 25 | 44 | 19 | 13 | 25 | 59 | 15 |
| Percentage of students eligible for free or reduced-price lunch | | | | | | | | |
| Less than 20 percent | 39 | 20 | 48 | 20 | 11 | 28 | 61 | 11 |
| 20–49 percent | 41 | 29 | 44 | 16 | 11 | 31 | 59 | 10 |
| 50 percent or more | 44 | 34 | 42 | 14 | 10 | 29 | 63 | 7 |

[1] "Oldest" schools were built before 1970 and never renovated, or were renovated before 1980. "Moderate" schools were built between 1970 and 1984, or were built before 1970 and were renovated in 1980 or later. "Newest" schools were built after 1984.

[2] See *Supplemental Note 4* for a list of states that comprise each region.

NOTE: Percentages may not add to 100 due to rounding. Estimates are aggregates of data collected in 1994, 1995, and 1996.

SOURCE: U.S. Department of Education, NCES. *How Old Are Our Public Schools?* (NCES 1999–048), 1999.

# Age of School Buildings

Table 49-2 **Percentage distribution of public schools according to year of construction, by year of last major renovation: 1994–96**

| Year of last major renovation | Total | Year school was constructed<br>Before 1950 | 1950–69 | 1970–84 | 1985 or after |
|---|---|---|---|---|---|
| Total | 100 | 26 | 46 | 19 | 10 |
| Never | 27 | [illegible] | [illegible] | 8 | 6 |
| Before 1980 | 17 | [illegible] | [illegible] | 1 | — |
| 1980–89 | 17 | 5 | 8 | 3 | 1 |
| 1990–95 | 39 | 10 | 19 | 7 | 2 |

— Not applicable.

■ Schools defined as "oldest."

░ Schools defined as "newest."

NOTE: Percentages may not add to totals due to rounding. Estimates are aggregates of data collected in 1994, 1995, and 1996.

SOURCE: U.S. Department of Education, NCES. *How Old Are Our Public Schools?* (NCES 1999–048), 1999.

# Faculty Salaries

Table 55-1 **Average salaries (in constant 1997–98 dollars) of full-time instructional faculty on 9- or 10-month contracts according to institutional level and control, by academic rank: 1997–98**

| Academic rank | 4-year institutions<br>Total | Public | Private* | 2-year institutions<br>Total | Public | Private* |
|---|---|---|---|---|---|---|
| **All faculty** | **$54,211** | **$54,114** | **$54,443** | **$45,652** | **$45,919** | **$34,920** |
| Professor | 70,441 | 69,195 | 72,747 | 54,323 | 54,488 | 39,135 |
| Associate professor | 51,351 | 51,732 | 50,701 | 45,811 | 46,078 | 33,721 |
| Assistant professor | 42,105 | 42,582 | 41,357 | 39,306 | 39,623 | 30,335 |
| Instructor | 31,787 | 31,519 | 32,325 | 34,238 | 34,713 | 26,638 |
| Lecturer | 35,431 | 34,516 | 38,376 | 36,608 | 36,199 | — |
| No rank | 38,644 | 38,614 | 39,385 | 45,801 | 45,993 | 37,814 |

— Not available.

* Private, not-for-profit institutions only.

NOTE: See *Supplemental Note 3* for information on the Consumer Price Index (CPI).

SOURCE: U.S. Department of Education, NCES. 1997–98 Integrated Postsecondary Education Data System, "Salaries, Tenure, and Fringe Benefits of Full-Time Instructional Faculty Survey" (IPEDS-SA).

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# Before and After School Care

**Table 58-1** **Percentage of children in grades K–8 who received various types of care before or after school, by selected student characteristics: 1999**

| Student characteristic | Received care from relative[1] | | | Received care from nonrelative[1] | | | Attended center-based program | | | Child cared for self | | | Parental care | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | K–5 | 6–8 | Total | K–5 | 6–8 | Total | K–5 | 6–8 | Total | K–5 | 6–8 | Total | K–5 | 6–8 |
| **Total** | **19.3** | **21.1** | **15.5** | **7.4** | **9.5** | **3.1** | **18.5** | **20.3** | **14.7** | **11.7** | **4.9** | **25.9** | **51.9** | **52.5** | **50.7** |
| Race-ethnicity | | | | | | | | | | | | | | | |
| White | 16.0 | 17.8 | 12.5 | 7.7 | 10.1 | 2.9 | 16.5 | 18.8 | 12.0 | 12.1 | 4.3 | 27.3 | 54.9 | 55.7 | 53.2 |
| Black | 29.2 | 31.1 | 24.6 | 6.9 | 8.2 | 3.9 | 27.7 | 29.1 | 24.6 | 11.9 | 5.9 | 25.9 | 39.9 | 40.1 | 39.4 |
| Hispanic | 22.0 | 22.9 | 19.8 | 6.6 | 8.3 | 2.7 | 15.7 | 15.9 | 15.1 | 9.8 | 5.1 | 21.2 | 53.8 | 54.9 | 51.3 |
| Other | 20.8 | 23.5 | 15.5 | 8.1 | 10.4 | 3.6 | 21.3 | 22.3 | 19.2 | 12.6 | 8.8 | 20.3 | 48.0 | 47.2 | [3]49.6 |
| Household income | | | | | | | | | | | | | | | |
| $10,000 or less | 23.0 | 25.0 | 17.4 | 6.9 | 8.4 | 2.9 | 19.5 | 20.3 | 17.3 | 10.2 | 6.1 | 21.4 | 51.6 | 50.7 | 54.2 |
| 10,001–20,000 | 26.1 | 28.1 | 21.7 | 6.8 | 8.8 | 2.3 | 17.9 | 17.7 | 18.4 | 11.4 | 6.4 | 22.7 | 47.9 | 48.4 | 46.8 |
| 20,001–35,000 | 21.7 | 23.0 | 18.9 | 7.8 | 9.7 | 3.7 | 19.3 | 20.9 | 15.6 | 11.2 | 5.1 | 25.1 | 50.1 | 50.9 | 48.1 |
| 35,001–50,000 | 19.4 | 21.7 | 14.8 | 6.8 | 8.8 | 3.0 | 16.1 | 16.5 | 15.2 | 11.4 | 4.0 | 25.6 | 53.7 | 55.4 | 50.4 |
| 50,001 or more | 14.2 | 15.5 | 11.6 | 7.9 | 10.5 | 3.1 | 18.8 | 22.5 | 12.1 | 12.8 | 4.2 | 28.6 | 53.7 | 54.4 | 52.2 |
| Parents' highest education level | | | | | | | | | | | | | | | |
| Less than high school | 19.7 | 21.6 | 15.9 | 5.0 | 6.4 | 2.1 | 15.8 | 15.9 | 15.7 | 10.4 | 6.0 | 19.5 | 57.4 | 58.0 | 56.2 |
| High school diploma or GED | 24.8 | 26.9 | 20.1 | 6.6 | 8.5 | 2.6 | 17.7 | 18.7 | 15.6 | 11.4 | 5.4 | 24.7 | 49.2 | 49.9 | 47.7 |
| Some college/vocational/technical | 21.8 | 23.9 | 17.3 | 8.8 | 11.0 | 4.1 | 19.3 | 21.1 | 15.5 | 12.2 | 5.3 | 26.9 | 48.3 | 48.7 | 47.5 |
| Bachelor's degree | 14.0 | 14.7 | 12.5 | 7.4 | 9.4 | 3.2 | 19.1 | 21.8 | 13.4 | 11.4 | 3.5 | 27.9 | 55.5 | 56.9 | 52.5 |
| Graduate/professional degree | 11.0 | 12.5 | 8.4 | 7.5 | 10.2 | 2.4 | 18.7 | 22.2 | 12.5 | 12.4 | 4.4 | 27.0 | 56.4 | 56.7 | 55.9 |
| Poverty status[2] | | | | | | | | | | | | | | | |
| Poor | 23.5 | 25.7 | 18.0 | 5.9 | 7.4 | 2.3 | 18.5 | 18.6 | 18.2 | 9.6 | 5.6 | 19.4 | 52.5 | 52.0 | 53.9 |
| Nonpoor | 18.0 | 19.7 | 14.8 | 7.9 | 10.2 | 3.2 | 18.4 | 20.8 | 13.7 | 12.4 | 4.7 | 27.5 | 51.7 | 52.7 | 49.9 |
| Family structure | | | | | | | | | | | | | | | |
| Two biological/adoptive parents | 12.5 | 14.0 | 9.4 | 6.4 | 8.3 | 2.2 | 15.6 | 16.8 | 13.0 | 9.5 | 3.4 | 22.6 | 61.3 | 62.4 | 59.0 |
| One biological/adoptive parent | 31.2 | 33.4 | 26.3 | 9.8 | 12.3 | 4.5 | 23.2 | 26.8 | 15.6 | 15.0 | 7.4 | 31.3 | 35.8 | 35.1 | 37.4 |
| One biological/adoptive parent and one stepparent | 20.7 | 23.1 | 16.9 | 7.2 | 9.7 | 3.3 | 18.7 | 21.3 | 14.5 | 14.4 | 5.0 | 29.0 | 48.0 | 48.0 | 48.0 |
| Other relatives | 18.6 | 22.4 | 10.2 | 4.0 | 4.3 | 3.4 | 22.4 | 16.0 | [3]36.4 | 10.5 | 6.8 | [3]18.3 | 54.4 | 59.0 | [3]44.3 |
| Step- or foster parents | [3]19.3 | [3]15.4 | [3]24.2 | 2.8 | 5.0 | 0 | [3]15.5 | [3]20.3 | [3]9.4 | [3]16.1 | [3]9.4 | [3]24.8 | [3]54.6 | [3]59.3 | [3]48.5 |

[1] Care received from a relative or nonrelative may be provided inside or outside of the child's home.

[2] The poverty measure combines information about household income and composition. See *Supplemental Note 2* for more information.

[3] Interpret with caution; standard errors are large due to small sample size.

NOTE: The National Household Education Survey (NHES) asked parents or guardians about the type of care received by the child on a regular basis before or after school. "Received care from a relative" includes care received from someone other than the parent or guardian. Percentages may not add to 100.0 because children can be included in more than one type of care arrangement. See *Supplemental Note 3* for information on the racial-ethnic categories. See the glossary for the definitions of type of care arrangements.

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Parent Interview Component).

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# Parental Involvement in Schools

**Table 59-1** **Percentage of students in grades K–12 whose parents reported involvement in their child's school, by grade and selected characteristics: 1996 and 1999**

| Characteristic | Attended general meeting | | Attended scheduled meeting with teacher | | Attended school event | | Acted as a volunteer or served on a committee | | Indicated involvement in any of the four activities | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1999 | 1996 | 1999 | 1996 | 1999 | 1996 | 1999 | 1996 | 1999 |
| | | | | | Grades K–12 | | | | | |
| **Total** | **76.9** | **79.0** | **71.8** | **73.0** | **66.7** | **66.2** | **38.7** | **38.0** | **91.7** | **92.0** |
| Race-ethnicity | | | | | | | | | | |
| White | 79.0 | 81.1 | 72.6 | 73.2 | 71.6 | 72.3 | 44.1 | 43.8 | 93.5 | 94.0 |
| Black | 71.6 | 75.2 | 68.8 | 72.2 | 56.4 | 54.8 | 26.9 | 27.2 | 86.4 | 87.7 |
| Hispanic | 73.6 | 74.2 | 71.5 | 72.1 | 54.7 | 52.3 | 26.4 | 26.0 | 89.0 | 87.6 |
| Other | 73.2 | 77.4 | 71.6 | 74.5 | 64.2 | 63.4 | 35.4 | 31.5 | 89.9 | 91.5 |
| Household income | | | | | | | | | | |
| $10,000 or less | 65.2 | 67.5 | 68.7 | 68.6 | 50.1 | 50.2 | 23.2 | 22.1 | 83.9 | 84.9 |
| 10,001–20,000 | 68.1 | 69.0 | 68.1 | 70.6 | 58.8 | 53.1 | 27.0 | 23.4 | 87.5 | 86.7 |
| 20,001–35,000 | 73.3 | 74.8 | 70.2 | 70.7 | 63.4 | 60.6 | 33.1 | 32.4 | 90.6 | 90.0 |
| 35,001–50,000 | 80.5 | 81.0 | 75.0 | 75.0 | 71.8 | 70.9 | 42.9 | 38.7 | 94.2 | 93.7 |
| 50,001 or more | 86.8 | 87.2 | 74.2 | 75.5 | 77.5 | 76.6 | 52.9 | 50.4 | 96.4 | 96.4 |
| Parents' highest education level | | | | | | | | | | |
| Less than high school | 57.5 | 57.9 | 62.7 | 61.6 | 42.2 | 39.2 | 16.9 | 13.5 | 79.1 | 77.0 |
| High school diploma/GED | 71.5 | 72.8 | 69.2 | 69.6 | 60.2 | 59.0 | 30.1 | 26.7 | 89.3 | 88.7 |
| Some college/vocational/technical | 77.9 | 79.6 | 72.5 | 74.4 | 69.2 | 67.2 | 39.2 | 38.1 | 92.9 | 93.6 |
| Bachelor's degree | 87.4 | 87.4 | 77.4 | 79.1 | 76.4 | 76.2 | 52.3 | 50.4 | 96.8 | 97.1 |
| Graduate/professional school | 88.5 | 89.3 | 76.3 | 75.3 | 81.9 | 79.0 | 56.7 | 54.6 | 97.2 | 96.7 |
| Family structure | | | | | | | | | | |
| Two biological/adoptive parents | 82.2 | 84.9 | 74.0 | 75.9 | 71.3 | 71.8 | 46.9 | 47.1 | 94.5 | 95.2 |
| One biological/adoptive parent | 69.2 | 72.0 | 70.3 | 70.1 | 60.4 | 59.2 | 28.3 | 26.9 | 88.0 | 88.0 |
| One biological/adoptive and one stepparent | 72.7 | 74.2 | 69.3 | 69.1 | 63.3 | 64.6 | 26.9 | 30.2 | 90.8 | 90.6 |
| Other relatives | 60.3 | 66.2 | 54.0 | 66.3 | 50.5 | 48.1 | 20.3 | 19.6 | 76.4 | 82.8 |
| Step- or foster parents | *69.0 | *62.6 | *67.5 | *61.5 | *55.0 | *54.0 | *23.5 | *22.2 | 86.2 | 82.7 |

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# Parental Involvement in Schools

Table 59-1 **Percentage of students in grades K–12 whose parents reported involvement in their child's school, by grade and selected characteristics: 1996 and 1999—Continued**

| Characteristic | Attended general meeting 1996 | Attended general meeting 1999 | Attended scheduled meeting with teacher 1996 | Attended scheduled meeting with teacher 1999 | Attended school event 1996 | Attended school event 1999 | Acted as a volunteer or served on a committee 1996 | Acted as a volunteer or served on a committee 1999 | Indicated involvement in any of the four activities 1996 | Indicated involvement in any of the four activities 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Grades K–5 | | | | | |
| **Total** | **83.2** | **84.7** | **86.1** | **87.3** | **71.7** | **70.3** | **48.9** | **48.1** | **96.2** | **96.4** |
| Race-ethnicity | | | | | | | | | | |
| White | 85.5 | 86.6 | 88.0 | 89.4 | 76.3 | 77.0 | 55.8 | 55.8 | 97.3 | 98.0 |
| Black | 77.6 | 80.5 | 78.8 | 82.6 | 62.2 | 57.9 | 34.3 | 35.0 | 92.1 | 92.8 |
| Hispanic | 79.8 | 82.1 | 86.0 | 84.0 | 60.7 | 57.8 | 34.0 | 33.5 | 95.6 | 93.9 |
| Other | 80.0 | 83.6 | 85.6 | 88.7 | 72.5 | 68.7 | 46.6 | 42.5 | 97.1 | 96.9 |
| Household income | | | | | | | | | | |
| $10,000 or less | 72.6 | 73.4 | 79.4 | 80.2 | 55.2 | 56.1 | 29.6 | 29.2 | 90.9 | 91.5 |
| 10,001–20,000 | 73.2 | 77.2 | 81.7 | 82.9 | 66.9 | 59.9 | 35.2 | 30.0 | 94.1 | 94.0 |
| 20,001–35,000 | 80.8 | 81.8 | 84.9 | 83.6 | 69.6 | 65.1 | 44.2 | 41.8 | 96.0 | 95.1 |
| 35,001–50,000 | 88.6 | 87.8 | 89.1 | 90.1 | 76.6 | 75.5 | 55.4 | 50.8 | 98.0 | 98.1 |
| 50,001 or more | 92.7 | 92.6 | 91.3 | 92.9 | 82.4 | 80.8 | 66.6 | 65.1 | 99.3 | 99.3 |
| Parents' highest education level | | | | | | | | | | |
| Less than high school | 64.6 | 69.6 | 77.0 | 75.9 | 49.1 | 46.0 | 23.2 | 20.4 | 89.3 | 89.6 |
| High school diploma/GED | 79.5 | 79.4 | 83.2 | 82.9 | 66.5 | 62.7 | 39.0 | 34.9 | 95.2 | 93.9 |
| Some college/vocational/technical | 83.8 | 85.2 | 86.3 | 89.0 | 74.2 | 72.6 | 50.4 | 47.7 | 96.6 | 97.7 |
| Bachelor's degree | 92.9 | 91.9 | 91.5 | 92.5 | 79.9 | 80.2 | 64.6 | 64.6 | 99.1 | 99.1 |
| Graduate/professional school | 93.5 | 93.6 | 93.2 | 92.4 | 86.2 | 81.4 | 70.6 | 68.7 | 99.3 | 98.9 |
| Family structure | | | | | | | | | | |
| Two biological/adoptive parents | 87.9 | 90.0 | 88.8 | 90.6 | 75.5 | 74.6 | 57.8 | 57.8 | 98.1 | 98.5 |
| One biological/adoptive parent | 74.8 | 77.3 | 83.0 | 84.0 | 65.6 | 64.3 | 36.5 | 34.9 | 93.4 | 93.5 |
| One biological/adoptive and one stepparent | 80.0 | 79.9 | 83.1 | 82.4 | 68.1 | 70.0 | 33.8 | 41.6 | 94.4 | 94.1 |
| Other relatives | 75.6 | 79.1 | *70.4 | 78.1 | 62.6 | *56.3 | 30.3 | 27.7 | 88.6 | 94.5 |
| Step- or foster parents | *75.2 | *77.8 | *77.7 | *75.5 | *72.0 | *55.4 | *22.2 | *27.7 | 96.1 | 96.9 |

# Parental Involvement in Schools

Table 59-1 **Percentage of students in grades K–12 whose parents reported involvement in their child's school, by grade and selected characteristics: 1996 and 1999—Continued**

| Characteristic | Attended general meeting 1996 | Attended general meeting 1999 | Attended scheduled meeting with teacher 1996 | Attended scheduled meeting with teacher 1999 | Attended school event 1996 | Attended school event 1999 | Acted as a volunteer or served on a committee 1996 | Acted as a volunteer or served on a committee 1999 | Indicated involvement in any of the four activities 1996 | Indicated involvement in any of the four activities 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Grades 6–8 | | | | | |
| **Total** | **77.9** | **80.8** | **69.5** | **71.2** | **65.7** | **67.2** | **30.4** | **31.2** | **91.5** | **92.5** |
| Race-ethnicity | | | | | | | | | | |
| White | 80.0 | 83.0 | 70.1 | 70.7 | 72.1 | 73.6 | 34.9 | 36.2 | 93.9 | 94.8 |
| Black | 72.6 | 76.9 | 68.2 | 71.8 | 52.0 | 53.2 | 21.4 | 20.8 | 85.9 | 86.9 |
| Hispanic | 75.2 | 73.1 | 68.2 | 69.8 | 51.7 | 50.5 | 20.0 | 20.2 | 87.5 | 86.7 |
| Other | 73.5 | 84.4 | 69.4 | 79.8 | 58.1 | 68.9 | 23.9 | 24.9 | 87.8 | 94.0 |
| Household income | | | | | | | | | | |
| $10,000 or less | 63.7 | 65.9 | 67.0 | 64.7 | 45.1 | 46.3 | 17.2 | 15.5 | 80.6 | 83.1 |
| 10,001–20,000 | 69.0 | 66.8 | 65.2 | 65.9 | 56.5 | 47.4 | 20.4 | 19.8 | 86.1 | 83.9 |
| 20,001–35,000 | 75.1 | 77.8 | 67.5 | 72.1 | 61.2 | 62.7 | 25.0 | 26.6 | 90.6 | 91.1 |
| 35,001–50,000 | 82.2 | 84.1 | 73.0 | 73.6 | 72.8 | 75.3 | 33.2 | 31.8 | 94.8 | 95.5 |
| 50,001 or more | 88.2 | 89.3 | 72.1 | 73.2 | 78.7 | 77.7 | 43.5 | 40.8 | 97.9 | 97.1 |
| Parents' highest education level | | | | | | | | | | |
| Less than high school | 60.0 | 61.5 | 60.8 | 61.1 | 37.4 | 40.2 | 12.4 | 10.7 | 77.4 | 79.2 |
| High school diploma/GED | 70.1 | 73.9 | 66.6 | 68.3 | 58.2 | 59.7 | 21.8 | 21.4 | 87.9 | 89.7 |
| Some college/vocational/technical | 81.5 | 82.3 | 71.7 | 70.0 | 70.1 | 67.8 | 32.5 | 31.9 | 94.5 | 93.5 |
| Bachelor's degree | 86.9 | 89.0 | 73.9 | 78.4 | 77.2 | 76.1 | 42.7 | 38.3 | 96.9 | 97.3 |
| Graduate/professional school | 90.3 | 90.0 | 73.1 | 75.3 | 80.5 | 81.0 | 44.2 | 46.8 | 97.6 | 96.7 |
| Family structure | | | | | | | | | | |
| Two biological/adoptive parents | 82.7 | 85.9 | 69.9 | 72.5 | 70.2 | 73.1 | 37.1 | 38.2 | 94.5 | 95.7 |
| One biological/adoptive parent | 70.0 | 72.5 | 68.0 | 68.9 | 59.0 | 57.6 | 21.4 | 22.1 | 86.1 | 86.7 |
| One biological/adoptive and one stepparent | 78.2 | 82.3 | 73.4 | 71.4 | 66.7 | 70.5 | 23.6 | 26.8 | 94.5 | 95.4 |
| Other relatives | *63.4 | *71.2 | *59.0 | *74.9 | *46.6 | *51.4 | 20.1 | 14.5 | 78.8 | 88.5 |
| Step- or foster parents* | 75.7 | 55.9 | 83.0 | 53.5 | 49.8 | 36.5 | 21.4 | 22.0 | 83.0 | 69.2 |

# Parental Involvement in Schools

Table 59-1 **Percentage of students in grades K–12 whose parents reported involvement in their child's school, by grade and selected characteristics: 1996 and 1999—Continued**

| Characteristic | Attended general meeting 1996 | Attended general meeting 1999 | Attended scheduled meeting with teacher 1996 | Attended scheduled meeting with teacher 1999 | Attended school event 1996 | Attended school event 1999 | Acted as a volunteer or served on a committee 1996 | Acted as a volunteer or served on a committee 1999 | Indicated involvement in any of the four activities 1996 | Indicated involvement in any of the four activities 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Grades 9–12 | | | | | |
| **Total** | **65.4** | **68.4** | **49.7** | **51.5** | **59.1** | **59.1** | **28.4** | **27.2** | **84.2** | **84.6** |
| Race-ethnicity | | | | | | | | | | |
| White | 67.8 | 71.6 | 50.0 | 51.6 | 63.7 | 64.5 | 32.6 | 31.8 | 87.3 | 87.7 |
| Black | 59.3 | 64.5 | 49.9 | 54.0 | 49.2 | 50.3 | 17.4 | 18.3 | 75.9 | 79.3 |
| Hispanic | 60.8 | 57.6 | 48.0 | 48.3 | 46.4 | 41.8 | 18.1 | 14.6 | 78.2 | 74.8 |
| Other | 61.5 | 63.1 | 49.2 | 49.7 | 54.8 | 51.5 | 25.8 | 20.3 | 79.4 | 81.7 |
| Household income | | | | | | | | | | |
| $10,000 or less | 47.6 | 55.4 | 42.5 | 45.1 | 42.1 | 39.6 | 13.3 | 11.1 | 69.3 | 71.0 |
| 10,001–20,000 | 58.0 | 55.2 | 46.0 | 51.1 | 46.1 | 44.9 | 17.7 | 13.6 | 76.8 | 75.0 |
| 20,001–35,000 | 59.2 | 60.9 | 48.0 | 48.2 | 55.0 | 51.4 | 21.4 | 21.2 | 81.7 | 80.5 |
| 35,001–50,000 | 66.3 | 68.0 | 54.3 | 52.9 | 63.4 | 60.4 | 30.6 | 25.7 | 87.8 | 85.5 |
| 50,001 or more | 77.5 | 78.6 | 51.8 | 54.0 | 69.8 | 70.3 | 40.6 | 37.7 | 91.4 | 91.9 |
| Parents' highest education level | | | | | | | | | | |
| Less than high school | 43.2 | 37.6 | 39.7 | 40.3 | 34.5 | 28.1 | 10.0 | 5.1 | 63.2 | 56.3 |
| High school diploma/GED | 58.0 | 60.5 | 45.9 | 47.5 | 50.6 | 52.0 | 20.8 | 16.8 | 79.7 | 78.9 |
| Some college/vocational/technical | 64.8 | 67.9 | 49.5 | 53.2 | 59.9 | 57.7 | 25.8 | 26.9 | 85.4 | 86.7 |
| Bachelor's degree | 78.2 | 78.8 | 55.7 | 57.5 | 69.5 | 69.6 | 38.3 | 36.4 | 92.8 | 93.4 |
| Graduate/professional school | 80.7 | 83.9 | 56.7 | 54.0 | 77.5 | 74.6 | 48.0 | 42.4 | 94.3 | 94.0 |
| Family structure | | | | | | | | | | |
| Two biological/adoptive parents | 71.8 | 75.2 | 51.4 | 53.5 | 64.9 | 66.0 | 35.2 | 35.9 | 88.3 | 89.4 |
| One biological/adoptive parent | 58.2 | 62.9 | 49.2 | 48.4 | 52.4 | 52.2 | 19.4 | 17.6 | 79.7 | 80.0 |
| One biological/adoptive and one stepparent | 59.1 | 61.8 | 49.0 | 52.0 | 54.4 | 54.0 | 21.4 | 19.7 | 83.2 | 83.0 |
| Other relatives | *42.8 | *47.2 | 34.6 | *46.5 | 39.9 | *36.0 | 9.9 | 12.4 | 62.5 | 64.8 |
| Step- or foster parents* | 56.8 | 52.5 | 44.0 | 53.5 | 39.1 | 66.1 | 26.5 | 16.8 | 77.0 | 78.9 |

* Interpret with caution; standard errors are large due to small sample size.

NOTE: Data for 1996 are revised from previously published figures. Ungraded students or children who were home schooled are not included in this analysis; these students accounted for 1.6 percent of the students in grades K–12. Percentages may not add to 100.0 because parents can be included in more than one type of involvement. See *Supplemental Note 2* for more information. See *Supplemental Note 3* for information on the racial-ethnic categories.

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1996 (Parent and Family Involvement in Education Component) and 1999 (Parent Interview Component).

## Parents' Attitudes Toward Schools

**Table 60-1** **Percentage of children in grades 3–12 with parents who were very satisfied with various aspects of the school their child attends, by selected family characteristics: 1993 and 1999**

| | Satisfaction measure | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Child's school | | Child's teachers | | School's academic standards | | School's order and discipline | |
| Characteristic | 1993 | 1999 | 1993 | 1999 | 1993 | 1999 | 1993 | 1999 |
| **Total** | 55.9 | 52.8 | 58.3 | 56.6 | 58.4 | 56.8 | 58.5 | 58.3 |
| Race-ethnicity | | | | | | | | |
| White | 57.2 | 53.0 | 58.9 | 56.5 | 59.8 | 56.4 | 59.7 | 57.7 |
| Black | 49.3 | 49.6 | 53.7 | 53.9 | 52.4 | 55.8 | 54.1 | 55.8 |
| Hispanic | 57.9 | 57.6 | 60.5 | 62.2 | 58.0 | 62.0 | 58.0 | 64.5 |
| Other | 53.5 | 47.4 | 58.9 | 52.2 | 58.3 | 51.5 | 57.5 | 57.0 |
| Household income | | | | | | | | |
| $10,000 or less | 49.6 | 55.6 | 57.3 | 61.6 | 54.9 | 60.2 | 57.0 | 61.2 |
| $10,001–20,000 | 54.4 | 51.2 | 58.3 | 57.2 | 54.2 | 56.2 | 54.5 | 55.0 |
| $20,001–35,000 | 55.3 | 49.3 | 58.2 | 55.4 | 58.2 | 53.9 | 58.5 | 55.1 |
| $35,001–50,000 | 57.4 | 50.9 | 57.7 | 53.1 | 59.6 | 54.7 | 59.4 | 57.2 |
| $50,001 or more | 59.8 | 54.9 | 59.3 | 57.0 | 62.3 | 58.3 | 61.4 | 60.5 |
| Parents' highest education level | | | | | | | | |
| Less than high school | 56.6 | 56.6 | 61.5 | 61.0 | 56.9 | 61.6 | 59.0 | 63.1 |
| High school diploma/GED | 54.5 | 52.1 | 58.9 | 56.2 | 56.9 | 55.8 | 57.4 | 56.6 |
| Some college/vocational/technical | 53.8 | 49.1 | 55.3 | 54.5 | 56.6 | 54.0 | 56.0 | 54.6 |
| Bachelor's degree | 59.8 | 52.0 | 60.9 | 56.3 | 62.7 | 56.6 | 62.5 | 59.6 |
| Graduate/professional degree | 60.1 | 58.5 | 59.1 | 58.8 | 63.2 | 60.8 | 63.2 | 63.2 |
| Family structure | | | | | | | | |
| Two biological/adoptive parents | 57.1 | 54.8 | 58.5 | 58.1 | 59.2 | 58.0 | 59.4 | 60.3 |
| One biological/adoptive parent | 51.8 | 50.3 | 56.7 | 54.9 | 55.9 | 55.6 | 55.6 | 55.6 |
| One biological/adoptive and one stepparent | *51.0 | 51.9 | *66.5 | 55.7 | *40.3 | 55.1 | *47.2 | 56.5 |
| Other relatives | *63.0 | 46.9 | *65.2 | 52.4 | *62.3 | 55.3 | *63.6 | 56.3 |
| Urbanicity | | | | | | | | |
| Live inside urban area | 55.4 | 54.0 | 57.9 | 57.0 | 58.7 | 58.3 | 59.1 | 60.9 |
| Live outside urban area | 56.4 | 53.6 | 59.9 | 57.3 | 57.9 | 56.2 | 55.7 | 54.8 |
| Rural | 56.8 | 49.2 | 58.3 | 55.3 | 58.0 | 53.5 | 59.0 | 53.4 |

* Interpret with caution; standard errors are large due to small sample size.

NOTE: Included in the total but not shown separately are children from other types of family structures. See *Supplemental Note 2* for information on the National Household Education Survey (NHES). See *Supplemental Note 3* for information on the racial-ethnic and urbanicity categories.

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1993 (School Safety and Discipline Component) and 1999 (Parent Interview Component).

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# Public Elementary and Secondary Expenditures

**Table 61-1** **Public school district expenditures per student, by selected district characteristics: School year 1995–96**

| District characteristic | Expenditures: Total | Instruction | Support services | Capital outlay | Other | Number of districts |
|---|---|---|---|---|---|---|
| **Total** | **$6,555** | **$3,473** | **$1,876** | **$617** | **$589** | **14,493** |
| Metropolitan status | | | | | | |
| Primarily serves a central city | $6,742 | $3,607 | $1,958 | $567 | $610 | 709 |
| Serves a metropolitan area but not a central city | 6,711 | 3,526 | 1,920 | 677 | 588 | 5,751 |
| Does not serve a metropolitan area | 5,952 | 3,168 | 1,663 | 558 | 564 | 8,033 |
| Children in district below the poverty level | | | | | | |
| Less than 2.0 percent | 7,080 | 3,753 | 2,074 | 639 | 614 | 3,535 |
| 2.0– 9.9 percent | 6,912 | 3,631 | 1,961 | 701 | 618 | 3,623 |
| 10.0–19.0 percent | 6,075 | 3,184 | 1,729 | 619 | 544 | 3,618 |
| More than 19.0 percent | 6,422 | 3,459 | 1,844 | 529 | 590 | 3,717 |

NOTE: In the Common Core of Data (CCD) survey, poverty is determined based on a set of money-income thresholds determined by the Bureau of the Census that vary by family size and composition. If a family's total income is less than that family's threshold, then that family, and every individual in it, is considered to be poor. See *Supplemental Note 15*.

SOURCE: U.S. Department of Education, NCES. Common Core of Data, "Public School District Universe Survey," 1995–96, and "Public School District Financial Survey," 1995–96.

**Table 61-2** **Public school district expenditures per student, by function, poverty level, and metropolitan status: School year 1995–96: Geographical cost-of-education adjusted**

| District characteristic | Expenditures: Total | Instruction | Support services | Capital outlay | Other | Number of districts |
|---|---|---|---|---|---|---|
| **Total** | **$6,647** | **$3,530** | **$1,904** | **$617** | **$596** | **14,338** |
| Metropolitan status | | | | | | |
| Primarily serves a central city | $7,010 | $3,761 | $2,029 | $583 | $637 | 694 |
| Serves a metropolitan area but not a central city | 7,030 | 3,705 | 2,017 | 694 | 613 | 5,694 |
| Does not serve a metropolitan area | 5,302 | 2,823 | 1,483 | 497 | 500 | 7,950 |
| Children in district below the poverty level | | | | | | |
| Less than 2.0 percent | 7,200 | 3,825 | 2,118 | 634 | 622 | 3,382 |
| 2.0–9.9 percent | 7,258 | 3,825 | 2,067 | 722 | 643 | 3,621 |
| 10.0–19.0 percent | 5,948 | 3,120 | 1,696 | 600 | 532 | 3,618 |
| More than 19.0 percent | 6,450 | 3,483 | 1,846 | 527 | 594 | 3,717 |

NOTE: The geographical cost-of-education index (CEI) for 1993-94 available from NCES, Education Finance Statistics Center (http://nces.ed.gov/edfin/) was used to compute the cost-adjusted expenditures. CEI measures how much more it would cost to provide the same quantities and qualities of school resources and services in different locations.

SOURCE: U.S. Department of Education, NCES, Common Core of Data, Public School District Universe Survey, 1995-96 and Public School District Financial Survey, 1995-96.

# National Indicators of Public Effort

**Table 62-1** Indicators of public effort to fund education (in constant 1998 dollars), by level: Selected school years ending 1930–97

| School year ending | Public education revenue per student*: Elementary/ secondary | Public education revenue per student*: Postsecondary education | Per student revenue as a percentage of per capita personal income: Elementary/ secondary | Per student revenue as a percentage of per capita personal income: Postsecondary education |
|---|---|---|---|---|
| 1930 | $709 | $1,490 | 10.7 | 22.5 |
| 1940 | 949 | 1,671 | 13.6 | 24.0 |
| 1950 | 1,325 | 2,745 | 13.9 | 28.8 |
| 1960 | 2,021 | 3,881 | 15.8 | 30.4 |
| 1966 | 2,697 | 4,923 | 17.2 | 31.3 |
| 1968 | 3,093 | 5,004 | 18.4 | 29.7 |
| 1970 | 3,435 | 5,390 | 19.8 | 31.1 |
| 1971 | 3,596 | 5,052 | 20.3 | 28.6 |
| 1972 | 3,899 | 5,128 | 21.0 | 27.6 |
| 1973 | 3,948 | 5,201 | 20.4 | 26.9 |
| 1974 | 4,073 | 5,034 | 21.5 | 26.5 |
| 1975 | 4,088 | 5,117 | 21.9 | 27.4 |
| 1976 | 4,326 | 4,940 | 22.4 | 25.5 |
| 1977 | 4,267 | 5,041 | 21.4 | 25.3 |
| 1978 | 4,391 | 5,004 | 21.2 | 24.2 |
| 1979 | 4,436 | 4,943 | 21.4 | 23.8 |
| 1980 | 4,400 | 4,742 | 21.8 | 23.5 |
| 1981 | 4,354 | 4,501 | 21.5 | 22.3 |
| 1982 | 4,229 | 4,384 | 21.1 | 21.9 |
| 1983 | 4,360 | 4,383 | 21.4 | 21.5 |
| 1984 | 4,531 | 4,492 | 21.1 | 20.9 |
| 1985 | 4,755 | 4,900 | 21.6 | 22.2 |
| 1986 | 5,012 | 5,212 | 22.1 | 23.0 |
| 1987 | 5,186 | 5,201 | 22.4 | 22.5 |
| 1988 | 5,293 | 5,225 | 22.3 | 22.0 |
| 1989 | 5,737 | 5,261 | 23.8 | 21.8 |
| 1990 | 5,887 | 5,161 | 24.3 | 21.3 |
| 1991 | 5,907 | 5,040 | 24.8 | 21.2 |
| 1992 | 5,910 | 4,929 | 24.5 | 20.4 |
| 1993 | 5,931 | 4,911 | 24.5 | 20.3 |
| 1994 | 5,982 | 5,043 | 24.4 | 20.6 |
| 1995 | 6,010 | 5,184 | 24.1 | 20.8 |
| 1996 | 6,066 | 5,223 | 23.9 | 20.6 |
| 1997 | 6,145 | — | 23.7 | — |

— Not available.

* See *Supplemental Note 3* for information on the Consumer Price Index (CPI).

NOTE: Public funds for postsecondary education may be used at both public and private degree-granting institutions. Enrollment in both publicly and privately controlled institutions is included. See *Supplemental Note 14* for more information on the calculation of the statistics shown here.

SOURCE: U.S. Department of Education, NCES. *Digest of Education Statistics 1999* (NCES 2000–031); U.S. Department of Education, NCES. *120 Years of American Education: A Statistical Portrait* (NCES 93-442), 1993.

# Change in the Sources of Public School Financing

**Table 63-1** Percentage distribution of revenues for public elementary and secondary schools according to source of funds and region, by region: 1991–92 to 1996–97

| Region | 1991–92 | 1992–93 | 1993–94 | 1994–95 | 1995–96 | 1996–97 |
|---|---|---|---|---|---|---|
| | | | United States | | | |
| Local* | 46.8 | 47.0 | 47.5 | 46.2 | 45.6 | 45.2 |
| State | 46.4 | 45.8 | 45.2 | 46.9 | 47.6 | 48.1 |
| Federal | 6.8 | 7.1 | 7.2 | 7.0 | 6.8 | 6.7 |
| | | | Local* | | | |
| Northeast | 55.4 | 55.8 | 56.3 | 56.3 | 56.3 | 56.5 |
| Midwest | 56.2 | 55.5 | 55.0 | 48.3 | 47.6 | 47.4 |
| South | 43.8 | 43.7 | 43.5 | 43.9 | 43.4 | 43.4 |
| West | 32.0 | 33.4 | 36.1 | 36.6 | 35.6 | 33.9 |
| | | | State | | | |
| Northeast | 39.5 | 38.8 | 38.4 | 39.0 | 38.7 | 38.6 |
| Midwest | 37.9 | 38.5 | 39.0 | 45.8 | 46.7 | 46.8 |
| South | 48.5 | 48.0 | 48.0 | 48.1 | 49.0 | 48.9 |
| West | 60.7 | 59.0 | 55.7 | 54.9 | 56.3 | 58.4 |
| | | | Federal | | | |
| Northeast | 5.1 | 5.4 | 5.3 | 4.7 | 5.0 | 4.9 |
| Midwest | 5.9 | 6.1 | 6.0 | 5.9 | 5.7 | 5.7 |
| South | 7.8 | 8.4 | 8.4 | 8.0 | 7.6 | 7.8 |
| West | 7.3 | 7.7 | 8.2 | 8.5 | 8.1 | 7.7 |

* Includes a relatively small amount from nongovernmental private sources (gifts and tuition and transportation fees from patrons). These sources accounted for 2.6 percent of total revenues in 1995–96. (*Digest of Education Statistics 1998* (NCES 1999–036), 1999).

NOTE: Percentages may not add to 100.0 due to rounding. See *Supplemental Note 4* for a list of states that comprise each region.

SOURCE: U.S. Department of Education, NCES. Common Core of Data, "Public School District Universe Survey," 1991–92 through 1996–97, and "Public School District Financial Survey," 1991–92 through 1996–97.

# Disparity in Public School Finance

**Table 64-1** Variation in instructional expenditures per pupil among and within states (in constant 1996 dollars): School years 1992–93 to 1996–97

| Source of variation | School year 1992–93 | 1993–94 | 1994–95 | 1995–96 | 1996–97 |
|---|---|---|---|---|---|
| Among states | $9,150 | $8,679 | $7,831 | $8,134 | $8,143 |
| Within states | 7,611 | 7,247 | 4,852 | 5,319 | 5,488 |
| Total | 16,761 | 15,926 | 12,683 | 13,453 | 13,631 |
| Sample size* | 10,681 | 9,424 | 9,477 | 10,570 | 10,572 |

* In 1992–93, 1995–96, and 1996–97, data were collected from all school districts in each state, while in 1993–94 and 1994–95, data were collected from a sample of school districts in some states and in all districts in others.

NOTE: Only unified districts are included in the analysis. The school year Consumer Price Index (CPI) was used to adjust expenditures in all years to 1996 constant dollars. Analysis of variance (ANOVA) was used to separate the total variation into among-state and within-state variation. The sum of squares from ANOVA was used as a measure of variation. See *Supplemental Note 15* for more information.

SOURCE: U.S. Department of Education, NCES. Common Core of Data, "Elementary/Secondary School District Finance Data Files," School years 1992–93 to 1996–97.

# Instructional Expenditures for Higher Education

**Table 65-1** **Average instructional expenditures per full-time-equivalent (FTE) student, by type of institution and control: 1995–96**

| Type of institution | Public<br>Average expenditures | Public<br>Number of institutions | Private<br>Average expenditures | Private<br>Number of institutions |
|---|---|---|---|---|
| **All institutions** | **$3,854** | **1428** | **$4,470** | **1,536** |
| Research University I | 8,487 | 57 | 20,818 | 29 |
| Research University II | 5,836 | 26 | 9,534 | 11 |
| Doctoral Universities I & II | 5,301 | 66 | 8,407 | 47 |
| Master's Universities and Colleges I & II | 4,196 | 276 | 4,412 | 268 |
| Baccalaureate Colleges I & II | 4,071 | 129 | 4,282 | 824 |
| Associate of Arts Colleges | 3,244 | 874 | 2,944 | 357 |

NOTE: Average instructional expenditures are estimated by averaging the instructional expenditures per student computed for each institution within a type. The types of institutions are defined using the 1994 Carnegie Classification of higher education institutions. See *Supplemental Note 5* for more information. See *Supplemental Note 3* for information on the Consumer Price Index (CPI).

Source: U.S. Department of Education, NCES. 1995 Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF 1995) and 1995-96 "Finance Survey" (IPEDS-F FY 1996).

**Table 65-2** **Full-time-equivalent (FTE) enrollment and average percentage of graduate students enrolled, by type of institution and control: 1995–96**

| Type of institution | Average FTE per institution<br>Undergraduate students | Average FTE per institution<br>Graduate students | Average FTE per institution<br>First-professional students | Average percentage of total FTE enrollment per institution who are<br>Graduate students | Average percentage of total FTE enrollment per institution who are<br>First-professional students |
|---|---|---|---|---|---|
| | | | Public | | |
| **All institutions** | **4,779** | **450** | **60** | **4.0** | **0.4** |
| Research University I | 18,601 | 4,702 | 1,023 | 20.0 | 4.7 |
| Research University II | 12,919 | 2,441 | 352 | 15.3 | 2.1 |
| Doctoral Universities I & II | 9,466 | 1,841 | 195 | 17.3 | 1.6 |
| Master's Universities and Colleges I & II | 5,827 | 679 | 19 | 10.4 | 0.3 |
| Baccalaureate Colleges I & II | 2,345 | 22 | 0 | 1.2 | 0.0 |
| Associate of Arts Colleges | 3,309 | 0 | 0 | 0.0 | 0.0 |
| | | | Private | | |
| **All institutions** | **1,252** | **238** | **69** | **6.4** | **1.8** |
| Research University I | 6,405 | 4,135 | 1,310 | 36.8 | 10.5 |
| Research University II | 8,477 | 2,357 | 683 | 23.8 | 5.6 |
| Doctoral Universities I & II | 3,551 | 1,468 | 573 | 33.3 | 9.4 |
| Master's Universities and Colleges I & II | 2,025 | 491 | 86 | 19.9 | 2.4 |
| Baccalaureate Colleges I & II | 944 | 22 | 13 | 1.9 | 1.6 |
| Associate of Arts Colleges | 438 | 0 | 0 | 0.3 | 0.0 |

NOTE: The types of institutions are defined using the 1994 Carnegie Classification of higher education institutions. See *Supplemental Note 5* for more information. See *Supplemental Note 3* for information on the Consumer Price Index (CPI).

SOURCE: U.S. Department of Education, NCES. 1995 Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF 1995) and 1995-96 "Finance Survey" (IPEDS-F FY 1996).

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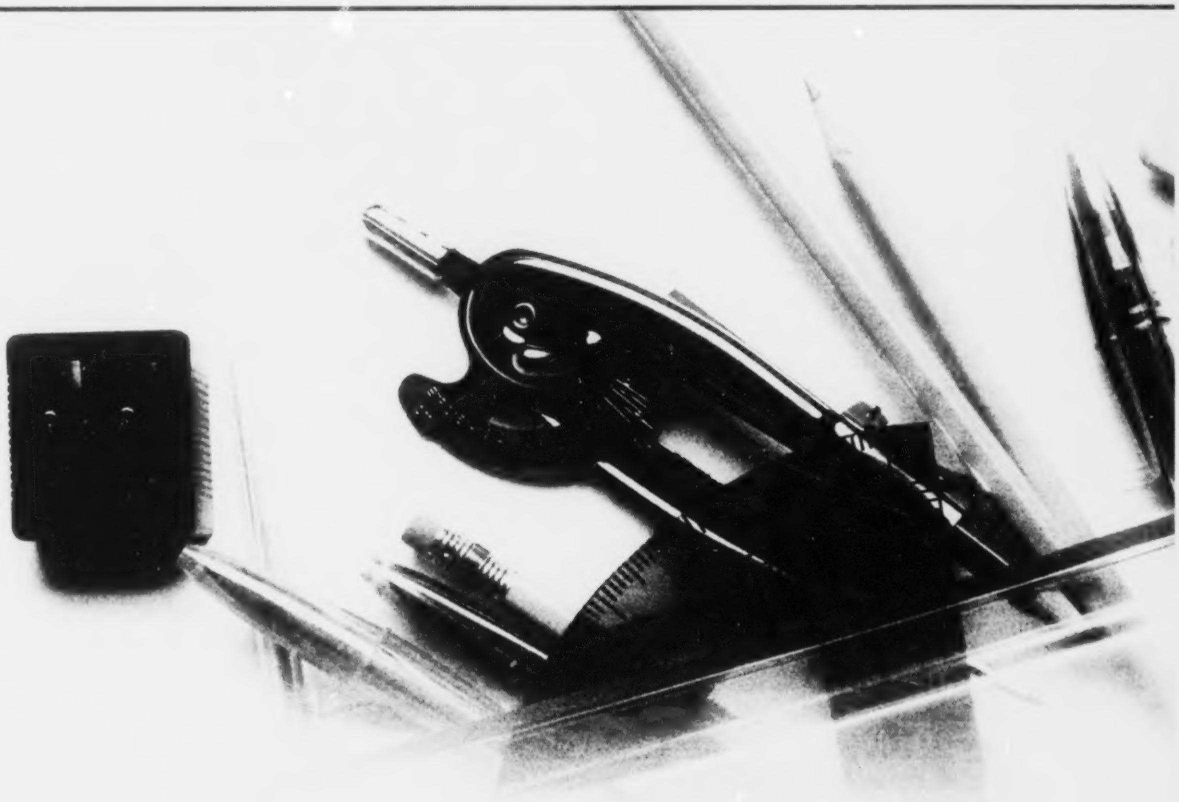
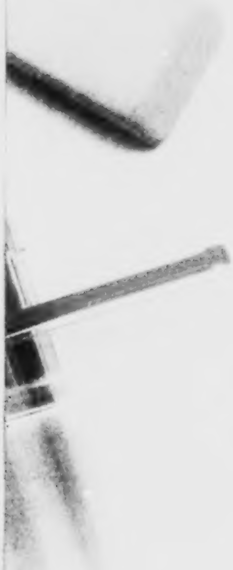
# Appendix 2
# Supplemental Notes





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# Note 1: The Current Population Survey (CPS)

The Bureau of the Census uses the Current Population Survey (CPS) to collect data on the population's social and economic characteristics, including its education and participation in the labor force. Data from the CPS are used in many indicators in this volume. This note provides further detail concerning changes in CPS data collection and the construction of selected variables, both of which affect the interpretation of indicators that appear in *The Condition of Education 2000*.

## CHANGES IN DATA COLLECTION

### Changes in Survey Questions

*Educational attainment*

Data from CPS questions on educational attainment are used in the analyses for *Indicators 5, 22, 23, 32,* and *38*. For comparisons of educational attainment over time, it is important to note that the questions in the CPS used to collect data on educational attainment changed in 1992.

From 1972 to 1991, the CPS defined educational attainment as "years of school completed." Individuals who completed 12 years of school were regarded as high school graduates, and those who completed 16 or more years of school were considered to be college graduates. Two questions provided data on the number of years of school completed: (1) "What is the highest grade . . . ever attended?" and (2) "Did . . . complete it?" An individual's educational attainment was considered his or her last fully completed year of schooling. Thus, individuals who responded that the highest grade they attended but did not complete was the first year of college were regarded as having completed 12 years of school.

Beginning in 1992, the CPS combined these two questions into a single question: "What is the highest level of school . . . completed or the highest degree . . . received?" In the new response categories, several of the lower education levels were collapsed into a single summary category such as "1st, 2nd, 3rd, or 4th grades." Then, several new categories were added, including "12th grade, no diploma"; "H.S. graduate—diploma or equivalent"; and "Some college—no degree." College degrees were listed by type, allowing for a more accurate description of educational attainment. The new question places more emphasis on credentials received and less on the last grade level attended or completed in college if attendance did not lead to a credential. The new categories are as follows:

- High school
- High school diploma or equivalent (e.g., GED)
- Some college but no degree
- Associate's degree in college, academic program
- Associate's degree in college, occupational or vocational program
- Bachelor's degree (e.g., B.A., A.B., B.S.)
- Master's degree (e.g., M.A., M.S., M.Eng., M.Ed., M.S.W., M.B.A.)
- Professional school degree (e.g., M.D., D.D.S., D.V.M., LL.B., J.D.)
- Doctoral degree (e.g., Ph.D., Ed.D.)

The change in questions complicates comparisons of educational attainment over time. The implications of this change on data comparability are as follows:

*High school completion*

It appears that the question change has had two minor effects on measured rates of high school completion. First, the initial question about educational attainment did not address high school equivalency certificates (GEDs).

## Note 1: The Current Population Survey (CPS)

**Continued**

Therefore, it is possible that an individual who attended 10th grade, dropped out without completing that grade, and later took the GED test and received a high school equivalency credential would not have been counted as completing high school. The new question treats these individuals as high school graduates. Since 1988, an additional question in the CPS asks respondents whether they have a GED. People who respond "yes" are classified as high school graduates when constructing the educational attainment variable. Prior to 1988, the vast majority of high school graduates did not fall into this category, and the overall increase was small.

Second, there has been a slight reduction in the number of people who are considered high school graduates. The CPS initially counted individuals who completed 12th grade as high school graduates. The revised question added a response category: "12th grade, no diploma." Individuals who select this response are not considered graduates. The number of individuals in this category is small.

*College completion*

With the increasing prevalence of individuals taking more than 4 years to earn a bachelor's degree, some researchers are concerned that the college completion rate based on the category "4th year or higher of college completed" overstates the number of respondents with a bachelor's degree (or higher). In fact, however, the college completion rates among those ages 25–29 in 1992 and 1993 were similar to the completion rates for those in 1990 and 1991 despite the changes in questions in 1992. In sum, the change in the question has had little effect on measured college completion rates.

*Some college*

Based on the new question, an individual who attends college for only a few months would respond "some college," compared with the former question to which the response would have been "attended first year of college and did not complete it." In the past, the calculation of the percentage of the population with 1–3 years of college excluded these individuals. With the new question, these respondents are included in the "some college" category. Thus, the percentage of individuals with "some college" might be larger than the percentage with 1–3 years of college because "some college" includes those who have not completed an entire year of college, whereas "1–3 years of college" does not include these people. Therefore, it would not be accurate to make comparisons between the percentage of those with "some college or an associate's degree" using the new question and the percentage of those who completed "1–3 years of college" using the old question.

### Effects of Changes in Educational Attainment Questions on Earnings Data

*Indicator 23* presents estimates of annual median earnings for wage and salary workers with different levels of educational attainment. The discussion above suggests that the "high school graduate with no further education" category based on the new item is larger than before because it includes all those with an equivalency certificate; however, the category is actually smaller because it excludes those who completed "12th grade, no diploma" and those with only a few months of college. The latter group is now included in the "1–3 years of college" category.

Nevertheless, the employment and earnings of the respondents who were added and dropped from each category are similar; therefore, the net effect of the misclassification on employment rates and average annual earnings is likely to be minor. Thus, it is still useful to compare the employment rates and median annual earnings of recent cohorts with "some college or

# Note 1: The Current Population Survey (CPS)

**Continued**

an associate degree" with older cohorts who completed "1–3 years of college."

For further information on this issue, see Kominski and Siegel (1993).

*Preprimary enrollment*

*Indicator 1* presents data on preprimary enrollment rates of children ages 3–5. In 1990, the wording differed from other years for a question pertaining to the school enrollment status of children ages 3–14. Before 1990 and after 1990, the question asked if children were enrolled in nursery, kindergarten, elementary, or secondary school. In 1990, the question was expanded to include preschool and prekindergarten, as well as nursery school, kindergarten, and elementary or secondary school. Due to this change, preprimary education enrollment figures for 3- to 5-year-olds in 1990 are not comparable with those for other years.

### Changes in Data Collection Procedures

Over the years, data collection methods for the CPS have changed. These changes may affect the ability to compare data before and after the changes. The following discussion presents information on several changes in data collection procedures that may affect data presented in indicators in this volume.

The method in which a survey is administered can affect responses. The Bureau began using Computer-Aided Personal (and Telephone) Interviews (CAPI and CATI) to administer the CPS in 1994. For earlier surveys, interviewers used printed questionnaires. Although the Bureau performed substantial testing to minimize or predict these effects, not all questions were tested. Therefore, some statistics may be affected by the change in survey procedures.

### Changes in Weighting of Estimates

In 1994, the Bureau calculated sample weights used to weight survey estimates for inferences about the general population using information from both the 1980 and the 1990 Decennial Censuses, and included adjustments for undercounted populations. These adjustments resulted in an increase in the weights assigned to any age, sex, or racial-ethnic group that was underrepresented in the 1990 Census. Adjustments for undercounted groups were not made for data collected prior to 1994.

## CONSTRUCTION OF SELECTED VARIABLES

*Parental education, by race-ethnicity*

Data on parents' highest level of education by race-ethnicity are presented in *Indicators 5* and *32*. Parents' highest level of education was obtained by merging the information from parents' records with the children's records. Estimates of mother's and father's highest level of education were calculated only for children who lived with their parents at the time of the survey. For example, the estimates of mother's highest level of education were calculated based on children who lived with "both parents" or with "mother only." For children who lived with "father only," the mother's educational level was unknown; therefore, the "unknown" group was excluded in the calculation of this variable.

*Family income*

The October CPS includes a family income variable, which was used in *Indicators 32* and *45* to measure a student's economic standing. Low income is the bottom 20 percent of all family incomes, high income is the top 20 percent of all family incomes, and middle income is the 60 percent in between. The table below

## Note 1: The Current Population Survey (CPS)

**Continued**

shows the real dollar amount (rounded to the nearest $100) of the breakpoints between low and middle income and between middle and high income. For example, low income in 1998 was defined as the range between $0 and $13,900, middle income was defined as the range between $13,901 and $65,000, and high income was defined as $65,001 and over. Therefore, the breakpoints between low and middle income and between middle and high income are $13,900 and $65,000, respectively.

**Dollar value (in current 1999 dollars) at the breakpoint between low and middle and between middle and high income categories of family income: October 1970–98**

| | Breakpoints between: | |
|---|---|---|
| October | Low and middle | Middle and high |
| 1970 | $3,300 | $11,900 |
| 1971 | — | — |
| 1972 | 3,500 | 13,600 |
| 1973 | 3,900 | 14,800 |
| 1974 | — | — |
| 1975 | 4,300 | 17,000 |
| 1976 | 4,600 | 18,300 |
| 1977 | 4,900 | 20,000 |
| 1978 | 5,300 | 21,600 |
| 1979 | 5,800 | 23,700 |
| 1980 | 6,000 | 25,300 |
| 1981 | 6,500 | 27,100 |
| 1982 | 7,100 | 31,300 |
| 1983 | 7,300 | 32,400 |
| 1984 | 7,400 | 34,200 |
| 1985 | 7,800 | 36,400 |
| 1986 | 8,400 | 38,200 |
| 1987 | 8,800 | 39,700 |
| 1988 | 9,300 | 42,100 |
| 1989 | 9,500 | 44,000 |
| 1990 | 9,600 | 46,300 |
| 1991 | 10,500 | 48,400 |
| 1992 | 10,700 | 49,700 |
| 1993 | 10,800 | 50,700 |
| 1994 | 11,800 | 55,500 |
| 1995 | 11,700 | 56,200 |
| 1996 | 12,300 | 58,200 |
| 1997 | 12,800 | 60,800 |
| 1998 | 13,900 | 65,000 |

— Not available

NOTE: Amounts are rounded to the nearest $100

# Note 2: The National Household Education Survey (NHES)

The National Household Education Survey (NHES), conducted in 1991, 1993, 1995, 1996, and 1999, collects data on education issues that cannot be addressed by collecting data on a school level. Data from NHES are used in several indicators that appear in this volume, covering such issues as enrollment in preprimary education, parents' involvement in their children's school activities, school choice, and participation in adult learning. This note provides further details on NHES data and how they are used in indicators that appear in the volume.

## INTERVIEWING PROCEDURES

NHES collects data on children primarily by interviewing parents or guardians of children, and only infrequently by interviewing the children themselves. When a child is sampled to participate in NHES, the parent or guardian who has the most knowledge about the child's care and education is selected as the respondent.

Although NHES is conducted primarily in English, provisions are made to interview persons who speak only Spanish. Questionnaires are translated into Spanish, and bilingual interviewers who are trained to complete the interview in either English or Spanish are employed.

- *Indicator 6* presents data collected from parents for their children who primarily speak English or Spanish at home.

## AGE OF THE CHILD

*Indicator 2* presents enrollment rates in preprimary education programs for 3-, 4-, and 5-year-olds by the child's age. NHES reports the "age of the child" for 1991 data as the age that child was on December 31, 1990; December 31, 1992 for 1993 data; December 31, 1994 for 1995 data; December 31, 1995 for 1996 data; and December 31, 1998 for 1999 data.

## PARENTS' HIGHEST LEVEL OF EDUCATION

Parents' highest level of education is defined as the highest level of education of the child's parents or nonparent guardians who reside in the household. It is based on the higher of the educational levels of the mother or female guardian or the father or male guardian. If only one parent resided in the household, that parent's highest level of education was used. *Indicators 2, 4, 46, 58,* and *59* present data by parents' highest level of education.

## PREPRIMARY ENROLLMENT RATES

Preprimary enrollment rates are calculated for *Indicator 2* by dividing the number of 3-, 4-, and 5-year-olds who (according to NHES data) were enrolled in center-based programs *or* kindergarten (as of December 31 of the year preceding the survey) by the total number of children ages 3, 4, and 5 in the United States as of the same date, according to the Bureau of the Census. Children who were enrolled in first grade or higher or who were in the "ungraded" category were excluded from the calculation of enrollment rates.

In 1999, NHES allowed respondents to indicate whether a child was enrolled only in a center-based program, only in kindergarten, or dually enrolled in both a center-based program *and* kindergarten. However, respondents were allowed to indicate that a child was dually enrolled only if the respondent first indicated that the child was enrolled in kindergarten in a series of enrollment questions. If a respondent first stated that a child was enrolled in a center-based program, the respondent was not allowed to indicate that the child was also enrolled in kindergarten. Due to this limitation in response options, dual enrollment may be somewhat underestimated. In table 2-2, the estimates of enrollment in center-based programs or kindergarten are not affected by this consideration.

## Note 2: The National Household Education Survey (NHES)

**Continued**

- *Indicator 2* presents data on preprimary enrollment rates including dual enrollment for 1999. The indicator does not present data on dual enrollment for the earlier years.

### RACE-ETHNICITY

NHES data on "race" and "Hispanic" status are combined to create a composite variable for race-ethnicity. If a child is Hispanic, he or she is classified by this ethnicity, regardless of whether his or her race is classified as white, black, or other. *Indicators 2, 6, 46, 58, 59,* and *60* present data by children's race-ethnicity.

### POVERTY MEASURE

NHES data on household income and the number of people living in the household, combined with information from the Bureau of the Census on income and household size, are used to classify children as "poor" or "nonpoor." Children in families whose incomes are at or below the poverty threshold are classified as "poor"; children in families with incomes above the poverty threshold are classified as "nonpoor." The thresholds used to determine whether a child is "poor" or "nonpoor" differ for each survey year. The weighted average poverty thresholds for various household sizes for 1991, 1993, 1995, 1996, and 1999 are shown in the following table.

It is not possible to determine whether respondents' families are above or below the poverty threshold for 1991 or 1993 with the same accuracy as for 1995, 1996, and 1999. In the earlier years, respondents were asked to indicate where their incomes fell within broad categories. In later years, respondents were asked to provide more precise estimates of household income. *Indicators 2* and *58* present data by children's poverty status.

# Note 2: The National Household Education Survey (NHES)

**Continued**

**Weighted average poverty thresholds, by household size: 1991, 1993, 1995, 1996, and 1999**

| Household size | Poverty threshold |
|---|---|
| **NHES:91** | |
| 2 | $8,865 |
| 3 | 10,860 |
| 4 | 13,924 |
| 5 | 16,456 |
| 6 | 18,587 |
| 7 | 21,058 |
| 8 | 23,582 |
| 9 or more | 27,942 |
| **NHES:93** | |
| 2 | 9,414 |
| 3 | 11,522 |
| 4 | 14,763 |
| 5 | 17,449 |
| 6 | 19,718 |
| 7 | 22,383 |
| 8 | 24,838 |
| 9 or more | 29,529 |
| **NHES:95** | |
| 2 | 9,933 |
| 3 | 12,158 |
| 4 | 15,569 |
| 5 | 18,408 |
| 6 | 20,804 |
| 7 | 23,552 |
| 8 | 26,267 |
| 9 or more | 31,280 |
| **NHES:96** | |
| 2 | 10,233 |
| 3 | 12,516 |
| 4 | 16,036 |
| 5 | 18,952 |
| 6 | 21,389 |
| 7 | 24,268 |
| 8 | 27,091 |
| 9 or more | 31,971 |
| **NHES:99** | |
| 2 | 10,636 |
| 3 | 13,001 |
| 4 | 16,655 |
| 5 | 19,682 |
| 6 | 22,227 |
| 7 | 25,188 |
| 8 | 28,023 |
| 9 or more | 33,073 |

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1991, 1993, 1995, 1996, and 1999.

# Note 3: Educational Attainment, Race-Ethnicity, Urbanicity, and CPI Adjustments

Variables come from different sources and time periods, so the definitions used to collect the information vary from survey to survey. Some figures must be adjusted to account for changes over time. This supplemental note describes how several variables used in some indicators in this volume were measured in each of the surveys that collected that information. The note also describes how monetary figures were adjusted to reflect comparable information from different years.

## EDUCATIONAL ATTAINMENT

For surveys that NCES sponsors, the categories of educational attainment are reported here as follows:

- National Household Education Survey: *Less than high school diploma, High school diploma or GED, Some college/vocational/technical, Bachelor's degree/College graduate*, and *Graduate or Professional degree.*
- Early Childhood Longitudinal Survey: *Less than high school; High school diploma or equivalent; Some college, including vocational/technical;* and *Bachelor's degree or higher.*
- National Education Longitudinal Survey of 1988 Eighth Graders: *Less than high school, High school diploma,GED, Some postsecondary education*, and *Bachelor's degree or higher.*
- High School and Beyond survey: *Less than high school graduate, High school, Certificate, Associate's, Bachelor's, Master's, Professional*, and *Doctorate.*

Within individual indicators, these categories may be collapsed to facilitate analysis. In *The Condition of Education 2000*, the previous definitions apply to *Indicators 2, 6, 10, 11, 12, 26, 33, 34, 46, 58, 59*, and *60*.

## RACE-ETHNICITY

Classifications indicating racial-ethnic heritage are based on self-identification, as in data collected by the Bureau of the Census, or on observer identification, as in data collected by the Office for Civil Rights. These categories are in accordance with the Office of Management and Budget's standard classification scheme:

*American Indian/Alaskan Native*: A person having origins in any of the original peoples of North America and maintaining cultural identification through tribal affiliation or community recognition.

*Asians/Pacific Islanders:* A person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area includes, for example, China, India, Japan, Korea, the Philippines, and Samoa. Please note that the essay on kindergartners and *Indicators 11, 12*, and 26 include Asian children, but not those classified as Pacific Islanders (i.e., Polynesian, Hawaiian, Samoan, Tongan, other Polynesian, Micronesian, Guamanian, other Micronesian and Pacific Islander, not specified).

*Black*: A person having origins in any of the black racial groups in Africa. In this report, normally excludes persons of Hispanic origin. Those measures that do not exclude persons of Hispanic origin are noted accordingly.

*Hispanic*: A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

*White*: A person having origins in any of the original peoples of Europe, North Africa, or the Middle East. In this report, normally excludes persons of Hispanic origin. Those measures that do not exclude persons of Hispanic origin are noted accordingly.

# Note 3: Educational Attainment, Race-Ethnicity, Urbanicity, and CPI Adjustments

Continued

*Other*: Any person that is not included in the above categories (White, Black, Hispanic, Asians/Pacific Islanders, and American Indian/ Alaskan Native).

Not all categories are shown in all indicators because of insufficient data in some of the smaller categories.

## URBANICITY

1. In the Census Bureau's Current Population Survey, metropolitan status is based on the concept of a metropolitan area (MA), a large population nucleus together with adjacent communities that have a high degree of economic and social integration with that nucleus.

   MAs are designated and defined by the Office of Management and Budget, following standards established by the interagency Federal Executive Committee on Metropolitan Areas, with the aim of producing definitions that are as consistent as possible for all MAs nationwide.

   Each MA must contain either a place with a minimum population of 50,000 or an urbanized area, as defined by the Bureau of the Census, and a total MA population of at least 100,000 (75,000 in New England). An MA is comprised of one or more central counties, and an MA can also include one or more outlying counties that have closed economic and social relationships with the central county. An outlying county must have a specified level of commuting to the central counties and also must meet certain standards regarding metropolitan character, such as population density, urban population, and population growth. In New England, MAs are composed of cities and towns rather than whole counties. The following terms characterize MAs:

   *Metropolitan*: the territory, population, and housing units in MAs.

   *Inside a central city*: a subdivision of a metropolitan area, which includes only the area inside of the central city.

   *Outside a central city*: a subdivision of a metropolitan area, which includes only the area outside of the central city.

   *Nonmetropolitan*: the territory, population, and housing units located outside MAs.

2. In the National Household Education Survey, urbanicity is based on the Census classification for the highest percentage of households in the respondent's residential ZIP Code. Urbanicity is designated by the following terms:

   *Urbanized area*: a place and the adjacent densely settled surrounding territory that combined have a minimum population of 50,000.

   *Urban, outside of urbanized areas*: incorporated or unincorporated places outside of urbanized areas that have a minimum population of 25,000, with the exception of rural portions of extended cities.

   *Rural*: all areas are not classified as urban.

3. In the Fast Response Survey System, urbanicity is defined in accordance with Census standards:

   *City:* a central city of a Metropolitan Statistical Area (MSA).

   *Urban fringe:* a place within an MSA of a central city but not primarily its central city.

# Note 3: Educational Attainment, Race-Ethnicity, Urbanicity, and CPI Adjustments

Continued

*Town:* a place not within an MSA, but with a population greater than or equal to 2,500 and defined as urban by Census.

*Rural:* a place with a population less than 2,500 and defined as rural by the Census.

4. In CCD, urbanicity is based on Metropolitan Status Codes. This is the classification of an education agency's service area relative to an MSA. Every education agency is placed in one of the following categories:
   A. Primarily serves a central city of an MSA
   B. Serves an MSA but not primarily its central city
   C. Does not serve an MSA

In *The Condition of Education 2000*, these definitions apply to *Indicators 28, 49, 60,* and *61*.

## USING THE CONSUMER PRICE INDEX (CPI) TO ADJUST FOR INFLATION

The Consumer Price Indexes represent changes in the prices of all goods and services purchased for consumption by urban households. Indexes vary for specific areas or regions, periods of time, major groups of consumer expenditures, and population groups. The indicators throughout the *Condition* use the "U.S. All Items CPI for All Urban Consumers, CPI-U."

The CPI-U is the basis for both the calendar year CPI and the school year CPI. The calendar year CPI is the same as the annual CPI-U. The school year CPI is calculated by adding the monthly CPI-U figures, beginning with July of the first year and ending with June of the following year, and then dividing that figure by 12. The school year CPI is rounded off at three decimal places. Data for the CPI-U are available on the Bureau of Labor Statistics Web site (given below). Also, figures for both the calendar year CPI and the school year CPI can be obtained from the *Digest of Education Statistics 1999* (NCES 1999–036), an NCES annual publication.

Although the CPI has many uses, its principal function in the *Condition* is to convert monetary figures (salaries, expenditures, income etc.) into inflation-free dollars to allow comparisons over time. For example, due to inflation, the buying power of a teacher's salary in 1995 is not comparable to that of a teacher in 1999. In order to make such a comparison, his or her 1995 salary must be converted into 1999 constant dollars using the following formula: the 1995 salary is multiplied by a ratio of the 1999 CPI over the 1995 CPI.

$$\text{1995 salary} * \frac{(\text{1999 CPI})}{(\text{1995 CPI})} = \text{1995 salary in 1999 constant dollars}$$

For more detailed information on how the CPI is calculated or the other types of CPI indexes, go to the Bureau of Labor Statistics web site at http://www.bls.gov/cpihome.htm.

In *The Condition of Education 2000*, this description of the CPI applies directly to the following *Indicators: 23, 55, 62,* and *64*.

# Note 4: Information on the Regional Classifications

## CLASSIFICATION 1

*Indicator* 49 uses the following regional classifications:

| Northeast | Southeast |
|---|---|
| Connecticut | Alabama |
| Delaware | Arkansas |
| District of Columbia | Florida |
| Maine | Georgia |
| Maryland | Kentucky |
| Massachusetts | Louisiana |
| New Hampshire | Mississippi |
| New Jersey | North Carolina |
| New York | South Carolina |
| Pennsylvania | Tennessee |
| Rhode Island | Virginia |
| Vermont | West Virginia |

| Central | West |
|---|---|
| Illinois | Alaska |
| Indiana | Arizona |
| Iowa | California |
| Kansas | Colorado |
| Michigan | Hawaii |
| Minnesota | Idaho |
| Missouri | Montana |
| Nebraska | Nevada |
| North Dakota | New Mexico |
| Ohio | Oklahoma |
| South Dakota | Oregon |
| Wisconsin | Texas |
|  | Utah |
|  | Washington |
|  | Wyoming |

## CLASSIFICATION 2

Data from the Bureau of the Census, including the Current Population Survey, the Common Core Data, and *Indicators* 3, 4, 47 and 63 used the following regional classifications:

| Northeast | South |
|---|---|
| Connecticut | Alabama |
| Maine | Arkansas |
| Massachusetts | Delaware |
| New Hampshire | District of Columbia |
| New Jersey | Florida |
| New York | Georgia |
| Pennsylvania | Kentucky |
| Rhode Island | Louisiana |
| Vermont | Maryland |
|  | Mississippi |
|  | North Carolina |
|  | Oklahoma |
|  | South Carolina |
|  | Tennessee |
|  | Texas |
|  | Virginia |
|  | West Virginia |

| Midwest | West |
|---|---|
| Illinois | Alaska |
| Indiana | Arizona |
| Iowa | California |
| Kansas | Colorado |
| Michigan | Hawaii |
| Minnesota | Idaho |
| Missouri | Montana |
| Nebraska | Nevada |
| North Dakota | New Mexico |
| Ohio | Oregon |
| South Dakota | Utah |
| Wisconsin | Washington |
|  | Wyoming |

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# Note 5: Classification of Postsecondary Education Institutions

The U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS) employs various categories to group postsecondary institutions. These categories are different in some ways from those that have been have been used in IPEDS in previous years and in the Higher Education General Information Survey (HEGIS), which preceded IPEDS. In order to allow historical comparisons and proper interpretations of the data presented in some of the indicators in this volume, this supplemental note describes the different classification systems used.

## BASIC IPEDS CLASSIFICATIONS

The term postsecondary institutions is the most general category used to refer to institutions with formal instructional programs and a curriculum designed primarily for students who have completed the requirements for a high school diploma or its equivalent. For many analyses, however, comparing all institutions from across this broad universe of postsecondary education institutions would not be appropriate. In IPEDS the universe of postsecondary institutions is divided into three main categories on the basis of highest degree awarded by the institution or the length of the program:

(1) Four-year degree-granting institutions confer recognized degrees that require four or more years to complete.

(2) Two-year degree-granting institutions confer recognized degrees that require at least two but less than 4 years to complete.

(3) Less than 2-year non-degree-granting institutions confer terminal occupational certificates or an award that is creditable toward a formal degree at the 2-year or higher level.

Each of these three categories is further subdivided by type of financial control: public, private not-for-profit, and private for-profit (e.g., proprietary schools). Consequently, IPEDS divides the entire universe of postsecondary institutions into 9 different "sectors." Each of the 3 categories of degree-granting institutions contains public institutions, not-for-profit institutions, and for-profit institutions. In some sectors (for example, 4-year, for-profit, degree-granting institutions) the number of institutions is small relative to other sectors. Beginning in 1996-97, the IPEDS universe of institutions was further divided according to their participation in the Title IV-C student aid programs of the Higher Education Act administered by the U.S. Department of Education. In order to qualify for Title IV-C programs institutions must meet certain eligibility criteria and reach a participation agreement with the U.S. Department of Education.

All indicators in this volume concerning postsecondary education institutions include the first two categories of 4-year and 2-year degree-granting institutions. Within these two groups, the particular numbers and types of institutions included in an indicator can vary depending on which years of IPEDS data were used and what classification of 2- and 4-year degree-granting institutions is employed. Prior to 1996–97, institutions were distinguished in IPEDS according to their accreditation by an agency or association recognized by the Secretary of the U.S. Department of Education. This subset of institutions was called the "institutions of higher education." The Title IV-C group of 2- and 4-year degree-granting postsecondary institutions differs from the institutions of higher education group mainly in that the institutions of higher education group included fewer 2-year for-profit colleges and more 4-year, degree-granting, private not-for-profit institutions. The institutions of higher education group also included a few 4-year non-degree granting institutions and some less-than-2-year institutions that were added over

# Note 5: Classification of Postsecondary Education Institutions

**Continued**

time after the beginning of IPEDS in 1986-87. The 2- and 4-year degree-granting public and not-for-profit postsecondary institutions forming the core of these institutions of higher education originated as the universe of institutions on which HEGIS was based. The institutions of higher education group differs from the Title IV-C group of 2-year and 4-year degree-granting institutions by about 1 percent in total enrollments in years where the two classifications overlap.[1]

- Indicator 7 relies on the institutions of higher education group of institutions for all years.
- Indicator 55 relies on the Title IV-C group of institutions for its 1997–98 data. Subdivisions of this data set include only private, nonprofit institutions under the label "private." For its 1972–73, 1980–81, and 1996–97 data, the indicator relies on the institutions of higher education group restricted to 2-year and 4-year degree-granting institutions. Subdivisions of these data sets include private, non-profit and private for-profit institutions.

## CARNEGIE CLASSIFICATION

Another grouping of 2- and 4-year degree-granting institutions used is the Carnegie Classification system. The Carnegie Classification groups American colleges and universities by their purpose and size. First developed in 1970 by the Carnegie Commission on Higher Education, the classification system does not establish a hierarchy among institutions of higher education; instead it groups colleges and universities with similar programs and purposes to facilitate meaningful comparisons and analysis. The Carnegie Classification system has been revised three times—in 1976, 1987, and 1994—since it was created. The current system divides institutions of higher education into 10 categories, with the tenth category—Professional and Specialized Institutions—subdivided into 10 subcategories.

**Category name(s) and version(s) in which used**

**Research Universities I: 1987, 1994**

1987 Definition:[2] *Applied to 3,389 institutions*

"These institutions offer a full range of baccalaureate programs, are committed to graduate education through the doctorate, and give high priority to research. They receive annually at least $33.5 million in federal support[3] and award at least 50 Ph.D. degrees each year."[4]

1994 Definition:[5] *Applied to 3,595 institutions*

"These institutions offer a full range of baccalaureate programs, are committed to graduate education through the doctorate, and give high priority to research. They award 50 or more doctoral degrees[6] each year. In addition, they receive annually $40 million or more in federal support."[7]

**Research Universities II: 1987, 1994**

1987 Definition:[2] *Applied to 3,389 institutions*

"These institutions offer a full range of baccalaureate programs, are committed to graduate education through the doctorate, and give high priority to research. They receive annually between $12.5 million and $33.5 million in federal support[3] for research and development and award at least 50 Ph.D. degrees each year."[4]

1994 Definition:[5] *Applied to 3,595 institutions*

"These institutions offer a full range of baccalaureate programs, are committed to graduate education through the doctorate, and give high priority to research. They award 50 or more doctoral degrees[6] each year. In addition, they receive annually between $15.5 million and $40 million in federal support."[7]

# Note 5: Classification of Postsecondary Education Institutions

**Continued**

The following indicators rely on the Carnegie Classification system. To the right of each is the version of the Carnegie system employed in that indicator to encode the data.

| | |
|---|---|
| ■ *Indicator 8* | 1994 |
| ■ *Indicator 52* | 1987 |
| ■ *Indicator 56* | 1987 |
| ■ *Indicator 57* | 1987 |
| ■ *Indicator 65* | 1994 |

Unless specified otherwise, type I and type II institutions have been combined in these indicators. *Indicator 52* also combines Research Universities I and II and Doctorate-granting institutions I and II under the label "4-year doctoral," and comprehensive universities and Colleges I and II and Liberal Arts Colleges I and II under the label "4-year nondoctoral."

The information used to classify institutions into the Carnegie categories comes from survey data. The 1994 version of Carnegie Classifications relied on data from IPEDS, the National Science Foundation, The College Board, and the 1994 Higher Education Directory published by Higher Education Publications, Inc. (HEP).

**Category name(s) and version(s) in which used—Continued**

**Doctorate-Granting Universities I: 1987; Doctoral Universities I: 1994**

1987 Definition:[2] *Applied to 3,389 institutions*

"In addition to offering a full range of baccalaureate programs, the mission of these institutions includes a commitment to graduate education through the doctorate degree. They award at least 40 Ph.D. degrees annually in five or more disciplines."[4]

1994 Definition:[5] *Applied to 3,595 institutions*

"In addition to offering a full range of baccalaureate programs, the mission of these institutions includes a commitment to graduate education through the doctorate. They award at least 40 doctoral degrees annually in five or more disciplines."[4]

**Doctorate-Granting Universities II: 1987; Doctoral Universities II: 1994**

1987 Definition:[2] *Applied to 3,389 institutions*

"In addition to offering a full range of baccalaureate programs, the mission of these institutions includes a commitment to graduate education through the doctorate degree. They award annually at least 20 PhD degrees in at least one discipline or 10 or more Ph.D. degrees in three or more disciplines."[4]

1994 Definition:[5] *Applied to 3,595 institutions*

"In addition to offering a full range of baccalaureate programs, the mission of these institutions includes a commitment to graduate education through the doctorate. They award annually at least 10 doctoral degrees—in three or more disciplines—or 20 or more doctoral degrees in one or more disciplines."[4]

**Comprehensive Universities and Colleges I: 1987; Master's (Comprehensive) Universities and Colleges I: 1994**

1987 Definition:[2] *Applied to 3,389 institutions*

"These institutions offer a full range of baccalaureate programs and, with few exceptions, graduate education through the master's degree. More than half of their baccalaureate degrees are awarded in two or more occupational or professional disciplines such as engineering or business administration. All of the institutions in this group enroll at least 2,500 students."[8]

1994 Definition:[5] *Applied to 3,595 institutions*

"These institutions offer a full range of baccalaureate programs and are committed to graduate education through the master's degree. They award 40 or more master's degrees annually in three or more disciplines."

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# Note 5: Classification of Postsecondary Education Institutions

**Continued**

**Category name(s) and version(s) in which used—Continued**

**Comprehensive Universities and Colleges II: 1987; Master's (Comprehensive) Universities and Colleges II: 1994**

1987 Definition:[2] *Applied to 3,389 institutions*

"These institutions award more than half of their baccalaureate degrees in two or more occupational or professional disciplines, such as engineering or business administration, and many also offer graduate education through the master's degree. All of the colleges and universities in this group enroll between 1,500 and 2,500 students."[8]

1994 Definition:[5] *Applied to 3,595 institutions*

"These institutions offer a full range of baccalaureate programs and are committed to graduate education through the master's degree. They award 20 or more master's degrees annually in one or more disciplines."

**Liberal Arts Colleges I: 1987; Baccalaureate Colleges I: 1994**

1987 Definition:[2] *Applied to 3,389 institutions*

"These highly selective institutions[9] are primarily undergraduate colleges that award more than half of their baccalaureate degrees in arts and science fields."

1994 Definition:[5] *Applied to 3,595 institutions*

"These institutions are primarily undergraduate colleges with major emphasis on baccalaureate degree programs. They award 40 percent or more of their baccalaureate degrees in liberal arts fields and are restrictive in admissions."

**Liberal Arts Colleges II: 1987; Baccalaureate Colleges II: 1994**

1987 Definition:[2] *Applied to 3,389 institutions*

"These institutions are primarily undergraduate colleges that are less selective and award more than half of their degrees in liberal arts fields. This category also includes a group of colleges that award *less* than half of their degrees in liberal arts but, with fewer than 1,500 students, are too small to be considered comprehensive."

1994 Definition:[5] *Applied to 3,595 institutions*

"These institutions are primarily undergraduate colleges with major emphasis on baccalaureate degree programs. They award less than 40 percent of their baccalaureate degrees in liberal arts fields or are less restrictive in admissions."

# Note 5: Classification of Postsecondary Education Institutions

**Continued**

**Category name(s) and version(s) in which used—Continued**

**Two-Year Community, Junior and Technical Colleges: 1987; Associate of Arts Colleges: 1994**

1987 Definition:[2] *Applied to 3,389 institutions*

"These institutions offer certificate of degree programs through the Associate of Arts level and, with few exceptions, offer no baccalaureate degrees."

1994 Definition:[5] *Applied to 3,595 institutions*

"These institutions offer associate of arts certificate or degree programs and, with few exceptions, offer no baccalaureate degrees."

**Professional Schools and Specialized Institutions: 1987, and specialized institutions: 1994**

1987 Definition:[2] *Applied to 3,389 institutions*

"These institutions offer degrees ranging from the bachelor's to the doctorate. At least 50 percent of the degrees awarded by these institutions are in a single specialized field." They are divided into the following subcategories:

- Theological seminaries, Bible colleges, and other institutions offering degrees in religion;
- Medical schools and medical centers;
- Other separate health professional schools;
- Schools of engineering and technology;
- Schools of business and management;
- Teachers colleges;
- Other specialized institutions; and
- Corporate-sponsored institutions.

1994 Definition:[5] *Applied to 3,595 institutions*

"These institutions offer degrees ranging from the bachelor's to the doctorate. At least 50 percent of the degrees awarded by these institutions are in a single discipline." They are divided into the following subcategories:

- Theological seminaries, Bible colleges, and other institutions offering degrees in religion;
- Medical schools and medical centers;
- Other separate health professional schools;
- Schools of engineering and technology;
- Schools of business and management;
- Teachers colleges;
- Other specialized institutions; and
- Tribal colleges.

# Note 5: Classification of Postsecondary Education Institutions

**Continued**

NOTES

[1] In 1996-97 there were about 4,000 Title IV-C eligible, 2-year and 4-year degree granting institutions in the IPEDS universe compared to about 3,500 institutions in the former HEGIS, or institutions of higher education, universe in the same year. In 1996-97 the total IPEDS universe also included about 500 non-Title IV-C eligible, degree-granting institutions, and 5,400 non-degree granting institutions.

[2] Carnegie Foundation for the Advancement of Teaching (1987).

[3] The years used in calculating average federal support were 1983, 1984, and 1985.

[4] The academic year for determining the number of degrees awarded by institutions was 1983–84.

[5] Carnegie Foundation for the Advancement of Teaching (1994).

[6] Doctoral degrees include Doctor of Education, Doctor of Juridical Science, Doctor of Public Health, and the Ph.D. in any field.

[7] Total federal obligation figures are available from the National Science Foundation's annual report, *Federal Support to Universities, Colleges, and Nonprofit Institutions*. The years used in averaging total federal obligations are 1989, 1990, and 1991.

[8] The years used for calculating average student enrollment were 1982, 1983, and 1984.

[9] The Astin index is used to determine the selectivity of liberal arts colleges. This index developed by Alexander W. Astin (at the University of California at Los Angeles) was based on average SAT scores (verbal and mathematics) of freshmen entering each institution, as reported to several institutional directories in the early 1970s.

# Note 6: The National Assessment of Educational Progress (NAEP)

The National Assessment of Educational Progress (NAEP), administered regularly in a number of subjects since 1969, has two major goals: (1) to assess student performance reflecting current educational and assessment practices; and (2) to measure change in student performance reliably over time. To address these goals, the NAEP includes a main assessment and a long-term trend assessment. The assessments are administered to separate samples of students at separate times, use separate instrumentation, and measure different educational content. Consequently, results from the assessments should not be compared. Data presented in *The Condition of Education 2000* are from both assessments.

## Main NAEP

*Indicators 13, 14, 15,* and *20* are based on the main NAEP. It periodically assesses students' performance in several subjects, following the curriculum frameworks developed by the National Assessment Governing Board (NAGB) and using the latest advances in assessment methodology. NAGB develops the frameworks using curriculum standards developed within the field, such as the mathematics standards developed by the National Council of Teachers of Mathematics.

The content and nature of the main NAEP evolves to match instructional practices, so the ability to measure change reliably over time is limited. As standards for instruction and curriculum change, so does the main NAEP. As a result, data from different assessments are not always comparable. Recent NAEP main assessment instruments have typically been kept stable for short periods of time, allowing trend results to be reported for, at most, three time points. For some subjects that are not assessed frequently, such as civics and art, no trend data are available.

NAEP results are reported in terms of predetermined achievement levels because each assessment reflects current standards of performance in each subject. The achievement levels define what students who are performing at Basic, Proficient, and Advanced levels of achievement should know and be able to do. NAGB establishes achievement levels whenever a new main NAEP framework is adopted. It should be noted that, while the achievement levels were adopted after NAGB's careful deliberation, the NAEP legislation requires that these levels be "used on a developmental basis until the Commissioner of Education Statistics determines. . .that such levels are reasonable, valid, and informative to the public," and that the Commissioner and the Board make clear the developmental status of such levels in all NAEP reports. Upon review of the available information, the Commissioner of Education Statistics has judged that the achievement levels are still in a developmental status; that is, they currently have certain limitations that require caution about their use.

The tables that follow summarize and describe, for each grade level, the achievement levels for reading, mathematics, writing, and civics.

# Note 6: The National Assessment of Educational Progress (NAEP)

**Continued**

**Table 1 Achievement levels for reading: Main NAEP**

| | |
|---|---|
| | **Grade 4** |
| **Basic** | Demonstrate an understanding of the overall meaning of what is read. Make relatively obvious connections between the text and personal experiences and extend ideas in text by making simple inferences. |
| **Proficient** | Demonstrate an overall understanding of the text, providing inferential as well as literal information. Extend ideas in text by making clear inferences, drawing conclusions, and making connections to own experiences. |
| **Advanced** | Generalize about topics in the reading selection and demonstrate an awareness of how authors compose and use literary devices. Judge text critically and, in general, give thorough answers that indicate careful thought. |
| | **Grade 8** |
| **Basic** | Demonstrate a literal understanding of what is read and make some interpretations. Identify specific aspects of text that reflect overall meaning, extend ideas in text by making simple inferences, recognize and relate interpretations and connections among ideas in text to personal experience, and draw conclusions based on the text. |
| **Proficient** | Show an overall understanding of the text, including inferential as well as literal information. Extend ideas in text by making clear inferences from it, drawing conclusions, and making connections to own experience, including other reading experiences. Identify some of the devices authors use in composing text. |
| **Advanced** | Describe the more abstract themes and ideas of overall text. Analyze both meaning and form and support analyses explicitly with examples from the text; extend text information by relating it to experiences and world events. Responses are thorough, thoughtful, and extensive. |
| | **Grade 12** |
| **Basic** | Demonstrate an overall understanding and make some interpretations of the text. Identify and relate aspects of text to its overall meaning, extend ideas in text by making simple inferences, recognize interpretations, make connections among and relate ideas in text to personal experiences, and draw conclusions. Identify elements of an author's style. |
| **Proficient** | Show an overall understanding of text including inferential as well as literal information. Extend ideas of text by making clear inferences, even when implicit, drawing conclusions, and making connections to personal experiences and other readings. Analyze author's use of literary devices. |
| **Advanced** | Describe more abstract themes and ideas in overall text. Analyze both meaning and form of text and explicitly support analyses with specific examples from text. Extend information from text by relating it to experiences and the world. Reponses are thorough, thoughtful, and extensive. |

# Note 6: The National Assessment of Educational Progress (NAEP)

**Continued**

**Table 2 Achievement levels for mathematics: Main NAEP**

| | |
|---|---|
| | **Grade 4** |
| Basic | Estimate and use basic facts to perform simple computations with whole numbers; show some understanding of fractions and decimals; and solve some simple real-world problems. Use four-function calculators, rulers, and geometric shapes. Written responses are often minimal and presented without supporting information. |
| Proficient | Use whole numbers to estimate, compute, and determine whether results are reasonable. Solve real-world problems and use four-function calculators, rulers, and geometric shapes appropriately. Employ problem-solving strategies such as identifying and using appropriate information. Written solutions should be organized and presented both with supporting information and explanations of how they were achieved. |
| Advanced | Solve complex and nonroutine real-world problems. Display mastery in the use of four-function calculators, rulers, and geometric shapes. Draw logical conclusions and justify answers and solution processes by explaining why, as well as how, they were achieved. Go beyond the obvious in interpretations and be able to communicate thoughts clearly and concisely. |
| | **Grade 8** |
| Basic | Complete problems correctly with the help of structural prompts such as diagrams, charts, and graphs. Solve problems through the appropriate selection and use of strategies and technological tools, including calculators, computers, and geometric shapes. Use fundamental algebraic and informal geometric concepts in problem-solving. |
| Proficient | Make conjectures, defend ideas, and give supporting examples. Understand connections between fractions, percents, decimals, and other mathematical topics such as algebra and functions. Compare and contrast mathematical ideas and generate own examples. Make inferences from data and graphs, apply properties of informal geometry, and accurately use tools of technology. Understand process of gathering and organizing data and be able to calculate, evaluate, and communicate results within the domain of statistics and probability. |
| Advanced | Probe examples and counterexamples in order to shape generalizations from which to develop models. Use number sense and geometric awareness to consider the reasonableness of an answer. Use abstract thinking to create unique problem-solving techniques and explain reasoning processes underlying conclusions. |

# Note 6: The National Assessment of Educational Progress (NAEP)

**Continued**

**Table 2 Achievement levels for mathematics: Main NAEP—Continued**

| | Grade 12 |
|---|---|
| Basic | Use estimation to verify solutions and determine reasonableness of results as applied to real-world problems. Use algebraic and geometric reasoning strategies to solve problems. Recognize relationships presented in verbal, algebraic, tabular, and graphical forms, and demonstrate knowledge of geometric relationships and corresponding measurement skills. Apply statistical reasoning in the organization and display of data and in reading tables and graphs. Generalize from patterns and examples in algebra, geometry, and statistics. Use correct mathematical language and symbols to communicate mathematical relationships and reasoning processes, and use calculators appropriately to solve problems. |
| Proficient | Demonstrate an understanding of algebraic, statistical, and geometric and spatial reasoning. Perform algebraic operations involving polynomials, justify geometric relationships, and judge and defend the reasonableness of answers as applied to real-world situations. Analyze and interpret data in tabular and graphical form, and understand and use elements of the function concept in symbolic, graphical, and tabular form. Make conjectures, defend ideas, and give supporting examples. |
| Advanced | Understand the function concept and be able to compare and apply the numeric, algebraic, and graphical properties of functions. Apply knowledge of algebra, geometry, and statistics to solve problems in more advanced areas of continuous and discrete mathematics. Formulate generalizations and create models through probing examples and counterexamples. Be able to communicate mathematical reasoning through clear, concise, and correct use of mathematical symbolism and logical thinking. |

# Note 6: The National Assessment of Educational Progress (NAEP)

**Continued**

**Table 3 Achievement levels for writing: Main NAEP**

| | |
|---|---|
| | **Grade 4** |
| Basic | Be able to produce a somewhat organized and detailed response within time allowed that shows a general grasp of the assigned writing task. Grammar, spelling, and capitalization should be accurate enough to communicate to a reader, although there may be mistakes that get in the way of meaning. |
| Proficient | Be able to produce an organized response within time allowed that shows an understanding of the assigned writing task. Writing should include details that support and develop the main idea and should show that a student is aware of the audience. Grammar, spelling, and capitalization should be accurate enough to communicate to a reader. There may be some mistakes, but these should not get in the way of meaning. |
| Advanced | Be able to produce an effective, well-developed response within time allowed that shows a clear understanding of the assigned writing task. Writing should include details and be clearly organized, should use precise and varied language, and show signs of analytical, evaluative, or creative thinking. Grammar, spelling, and capitalization should be accurate enough to communicate clearly and mistakes should be so few and so minor that a reader can easily skim over them. |
| | **Grade 8** |
| Basic | Be able to produce an effective response within the time allowed that shows a general understanding of the assigned writing task. Writing should show that the student is aware of the audience, and it should include supporting details in an organized way. Grammar, spelling, and capitalization should be accurate enough to communicate to a reader, although there may be mistakes that get in the way of meaning. |
| Proficient | Be able to produce a detailed and organized response within time allowed that shows an understanding of both the assigned writing task and the audience. Writing should include precise language and varied sentence structure, and it may show analytical, evaluative, or creative thinking. Grammar, spelling, and capitalization should be accurate enough to communicate to a reader. There may be some mistakes, but these should not get in the way of meaning. |
| Advanced | Be able to produce a fully developed response within the time allowed that shows a clear understanding of both the assigned writing task and the audience. Writing should show some analytical, evaluative, or creative thinking and may make use of literary strategies to clarify a point; it should also be clearly organized, demonstrating precise word choice and varied sentence structure. There should be few errors in grammar, spelling, punctuation, capitalization, and sentence structure; writers should demonstrate good control of these elements and may use them for stylistic effect in their work. |

# Note 6: The National Assessment of Educational Progress (NAEP)

**Continued**

Table 3 Achievement levels for writing: Main NAEP—Continued

| | Grade 12 |
|---|---|
| Basic | Be able to produce a well-organized response within time allowed that shows an understanding of both the assigned writing task and the audience. Writing should show some analytical, evaluative, or creative thinking and should include details that support and develop the main idea. Grammar, spelling, and capitalization should be accurate enough to communicate to a reader. There may be some mistakes, but these should not get in the way of meaning. |
| Proficient | Be able to produce an effectively organized and fully developed response within the time allowed that uses analytical, evaluative, or creative thinking. Writing should include details that support and develop the main idea and should show that the student is able to use precise language and variety in sentence structure to engage audience. There should be few errors in grammar, spelling, punctuation, capitalization, and sentence structure; writers should demonstrate good control of these elements and may use them for stylistic effect in their work. |
| Advanced | Be able to produce a mature and sophisticated response within time allowed that uses analytical, evaluative, or creative thinking. Writing should be detailed and fully developed, and it should show that the student is able to use literary strategies to develop ideas. Writing should be well crafted and coherent and show that the student is able to engage the audience through rich and compelling language, precise word choice, and variety in sentence structure. There should be few errors in grammar, spelling, punctuation, capitalization, and sentence structure; writers should demonstrate a sophisticated command of these elements and may use them for stylistic effect in their work. |

# Note 6: The National Assessment of Educational Progress (NAEP)

**Continued**

**Table 4 Achievement levels for civics: Main NAEP**

| | |
|---|---|
| | **Grade 4** |
| Basic | Have an understanding of what government is and what it does, be able to identify some things that American government is not allowed to do, have some understanding of the foundations of the American political system, and know that the world is divided into many countries. Understand rules and laws, rights and responsibilities, and ways to participate in governing, in the context of the student's school and community. |
| Proficient | Have a good understanding of what American government does and why it is not allowed to act in certain ways and have an age-appropriate understanding of the foundations of the American political system. Understand purposes of laws, ways shared beliefs unify Americans, what it means to be a citizen, rights and responsibilities of citizens, and the idea of public participation in governing. Describe ways in which countries interact with one another. |
| Advanced | Understand and be able to explain some purposes of government and recognize differences between power and authority and between limited and unlimited government. Be able to explain the importance of shared values in American democracy, to identify ways citizens can participate in governing, and to understand that with rights come responsibilities. Be able to explain how nations benefit when they resolve conflicts peacefully. |
| | **Grade 8** |
| Basic | Have some understanding of competing ideas about purposes of government, be able to describe advantages of limited government, and be able to define government, constitution, the rule of law, and politics. Be able to identify the fundamental principles of American democracy and the documents from which they originate. Understand the importance of a shared commitment to the core values of American democracy. Recognize the components of the political process and understand personal, political, and economic rights and responsibilities. Be able to describe the purposes of some international organizations. |
| Proficient | Understand and be able to explain purposes that government should serve. Have a good understanding of differences between government and civil society and of the importance of the rule of law. Recognize discrepancies between American ideals and reality and be able to describe continuing efforts to address them. Understand the separation and sharing of powers among branches of government and between federal and state governments and be able to explain how citizens influence government. Be able to describe events within the United States and other countries that have international consequences. |
| Advanced | Have a developed understanding of how civil society helps to maintain limited government and why the rule of law is important. Have a clear understanding of issues in which democratic values are in conflict and of past efforts to address the discrepancies between American ideals and reality. Understand how citizens can monitor and influence government and how responsible citizens support democracy. Recognize the impact of American democracy on other countries, as well as other countries' impact on American politics and society. |

# Note 6: The National Assessment of Educational Progress (NAEP)

**Continued**

**Table 4. Achievement levels for civics: Main NAEP—Continued**

| | Grade 12 |
|---|---|
| **Basic** | Have an understanding of what is meant by civil society, constitutional government, and politics. Know that constitutional governments can take different forms and understand the fundamental principles of American constitutional government and politics, including functions of political parties and other organizations. Understand both rights and responsibilities in a democratic society, and recognize value of political participation. Be familiar with international issues that affect the United States. |
| **Proficient** | Have a good understanding of how constitutions can limit the power of government and support the law. Be able to describe similarities and differences among constitutional systems of government. Be able to explain fundamental American democratic values, their applications, and their contribution to expanding political participation. Understand the structure of American government, be able to evaluate activities of political parties, interest groups, and media in public affairs, and be able to explain the importance of political participation, public service, and political leadership. Be able to describe major elements of American foreign policy and the performance of major international organizations. |
| **Advanced** | Have a thorough and mature understanding of the strengths and weaknesses of various forms of constitutional democracy. Be able to explain fully the structure of American government and the political process. Understand differences between American ideals and realities, explain past and present responses to those differences, and understand why civic dispositions and individual and collective political actions sustain democracy. Be able to explain objectives and consequences of American foreign policy. |

## LONG-TERM TREND NAEP

*Indicators 16, 17,* and *25* are based on the long-term trend NAEP. The long-term trend NAEP measures student performance in science, reading, writing, and mathematics. The long-term assessments have used the same instruments since their first administrations in the late 1960s and early 1970s for science, reading, and mathematics and the early 1980s for writing. Accordingly, the long-term trend NAEP does not reflect current teaching standards or curricula. Nonetheless, the long-term trend NAEP facilitates comparisons of student performance over time.

Results from the long-term trend NAEP are presented as mean scale scores. Unlike the main NAEP, the long-term trend NAEP does not define achievement levels. Another important difference between the two assessments is that they collect data from different groups. In the main NAEP, results are reported for grades 4, 8, and 12. In most long-term trend assessments, average scores are reported by age. For science, reading, and mathematics, students at ages 9, 13, and 17 are assessed.

# Note 7: The Third International Mathematics and Science Study (TIMSS)

Under the auspices of the International Association for the Evaluation of Educational Achievement (1997a, 1997b, 1997c, 1997d, 1998), the Third International Mathematics and Science Study (TIMSS) assessed and collected data for more than half a million students at five grade levels (the 3rd, 4th, 7th, and 8th grades plus the final year of secondary school), providing information on student achievement, student background characteristics, and school resources in 45 countries in 1995. TIMSS data presented in *The Condition of Education 2000* are taken from the assessment components (*Indicators 18* and *19*) and the Videotape Classroom Study (*Indicator 44*).

## TIMSS Assessment Components

The assessment components of TIMSS tested students in three populations:

- *Population 1*: Students enrolled in the two adjacent grades that contained the largest proportion of 9-year-old students at the time of the assessment—3rd- and 4th-grade students in most countries.
- *Population 2*: Students enrolled in the two adjacent grades that contained the largest proportion of 13-year-old students at the time of the assessment — 7th- and 8th-grade students in most countries.
- *Population 3*: Students enrolled in their final year of secondary education, which ranged from 9th- to 14th-grade. In many countries, students in more than one grade participated in the study because the length of secondary education varied by type of program (e.g., academic, technical, vocational).

The results should be interpreted carefully because countries varied in how they defined their population and in their compliance with the TIMSS sampling guidelines. Consequently, reasons for differences in performance are not clear, and assumptions cannot easily be made about the relationship between performance and the differences among countries' *Population* samples.

For example, particularly in *Population 3*, countries showed considerable variation in the age of the students tested. This assessment was intended to measure what students know when they leave the secondary school system, and therefore reflected differences among countries in how they prepare students to enter society after their schooling ends. A majority of countries participating in the assessment of *Population 3* tested students who were older, on average, than those tested for this *Population* in the United States, but no clear relationship exists between the age of the students tested and their performance. In some countries, data showed that their older students performed better than their younger students on the *Population 3* assessment. In other countries however, including the United States, younger students outperformed the older students on this same assessment. In fact, analyses of these data also show that, when including only students under the age of 18 in international comparisons, the average student in the United States still scored lower than the international average, and higher than the average student in only two other countries: Cyprus and South Africa. (NCES fothcoming)

All countries that participated in the study were required to administer assessments to the students in the two grades at *Population 2* but could choose whether to participate in the assessments of other populations. Forty-six countries participated in the survey of *Population 2*, of which 14 participated in the general assessment for all three *Populations*. For *Population 3*, in addition to general knowledge, countries were able to test two subgroups of students in their last year of secondary education: students taking advanced mathematics and students taking physics.

# Note 7: The Third International Mathematics and Science Study (TIMSS)

**Continued**

**Table 1 Countries participating in TIMSS, by population covered**

| Country | Population 1 | Population 2 | Population 3: General knowledge | Population 3: Advanced mathematics | Population 3: Physics |
|---|---|---|---|---|---|
| Argentina | | • | | | |
| Australia | • | • | • | • | • |
| Austria | • | • | • | • | • |
| Belgium (Flemish) | | • | | | |
| Belgium (French) | | • | | | |
| Bulgaria | | • | | | |
| Canada | • | • | • | • | • |
| Colombia | | • | | | |
| Cyprus | • | • | • | • | • |
| Czech Republic | • | • | • | • | • |
| Denmark | | • | • | • | • |
| England | • | • | | | |
| France | | • | • | • | • |
| Germany | | • | • | • | • |
| Greece | • | • | | • | • |
| Hong Kong | • | • | | | |
| Hungary | • | • | • | | |
| Iceland | • | • | • | | |
| Indonesia | • | • | | | |
| Iran, Islamic Republic | • | • | | | |
| Ireland | • | • | | | |
| Israel | • | • | • | • | • |
| Italy | • | • | • | | |
| Japan | • | • | | | |
| Korea | • | • | | | |
| Kuwait | • | • | | | |
| Latvia (Latvian-speaking schools) | • | • | | | • |
| Lithuania | | • | • | • | |
| Mexico | • | • | | | |
| Netherlands | • | • | • | | |
| New Zealand | • | • | • | | |
| Norway | • | • | • | | • |
| Philippines | | • | | | |
| Portugal | • | • | | | |
| Romania | | • | | | |
| Russian Federation | | • | • | • | • |
| Scotland | • | • | | | |
| Singapore | • | • | | | |
| Slovak Republic | | • | | | |
| Slovenia | • | • | • | • | • |
| South Africa | | • | • | | |
| Spain | | • | | | |
| Sweden | | • | • | • | • |
| Switzerland | | • | • | • | • |
| Thailand | • | • | | | |
| United States | • | • | • | • | • |

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# Note 7: The Third International Mathematics and Science Study (TIMSS)

**Continued**

Four countries—Argentina, Indonesia, Mexico, and the Philippines—were unable to complete the steps necessary for data to appear in the international TIMSS reports, chose not to release their results in the international report, or had their results published in a separate appendix to the international reports. Achievement scores and sampling information for these four countries are not included in *The Condition of Education 2000*.

The achievement scores for Italy are included in *The Condition of Education 2000* only for *Population 3*. Italy was unable to complete the steps necessary for its data to appear in the TIMSS reports for *Populations 1* and 2.

For all *Populations*, participating countries were required to meet sampling and other guidelines. These guidelines, and the extent to which countries met them for each of the *Populations*, are described in the following sections.

In some situations, where it was not possible to implement testing for the entire International Desired Population (*Population 1*, 2, or 3), countries defined a National Desired Population, which excluded some portion of the International Desired Population. For example, Israel's and Latvia's populations covered less than 100 percent of the International Desired Population because they defined their population according to the structure of their school systems.

Countries were also permitted within their desired population to define a population that excluded a small percentage (less than 10 percent) of schools or students that would be difficult to test (e.g., small schools or schools located in a remote area). Only England exceeded the 10-percent level for *Populations 1* and 2, excluding 12.1 and 11.3 percent of schools, respectively. Among countries that participated in the assessment of general knowledge for *Population 3*, Austria, Cyprus, Germany, the Netherlands, and the Russian Federation exceeded the 10-percent level.

TIMSS used a two-stage sample design. For *Populations 1* and 2, the first stage involved selecting 150 public and private schools within each country. Random sampling methods were then used to select from each school one math-

**Table 2 Countries covering less than 100 percent of the International Desired Population**

| Country | International Desired Population | |
|---|---|---|
| **Population 1** | **Coverage** | **Note on Coverage** |
| Israel | 72% | Hebrew Public Education System only |
| Latvia | 60% | Latvian-speaking schools only |
| **Population 2** | **Coverage** | **Note on Coverage** |
| Germany | 88% | 15 of 16 regions |
| Israel | 74% | Hebrew Public Education System only |
| Latvia | 51% | Latvian-speaking schools only |
| Lithuania | 84% | Lithuanian-speaking schools only |
| Switzerland | 86% | 22 of 26 cantons |
| **Population 3** | **Coverage** | **Note on Coverage** |
| Israel | 74% | Hebrew Public Education System only |
| Italy | 70% | 16 of 20 regions |
| Latvia | 50% | Latvian-speaking schools only |
| Lithuania | 84% | Lithuanian-speaking schools only |

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# Note 7: The Third International Mathematics and Science Study (TIMSS)

**Continued**

ematics class for each grade level within a population (generally 3rd and 4th for *Population 1* and 7th and 8th for *Population 2*). For *Population 3*, the first stage involved selecting 120 public and private schools in each country, and, within each school, 40 students were selected using random procedures. In addition, for *Population 3*, students were classified according to their preparation in physics and mathematics. For those countries that chose to participate in the assessments of physics and advanced mathematics, an additional sample was drawn from these classifications of students who had taken physics or advanced mathematics, respectively.

The required participation rates from the samples for all *Populations* were at least 85 percent of both schools and students or a combined rate of 75 percent for schools and students. Countries that did not reach a 50-percent participation rate without the inclusion of replacement schools, or failed to reach the required rate even with the inclusion of replacement schools, failed to meet the sampling standards for participation.

**Table 3 Countries participating in TIMSS, by compliance with sampling guidelines for Population 1**

| Compliance with sampling guidelines | Countries |
|---|---|
| Countries satisfying guidelines for sample participation rates, grade selection, and sampling procedures | Canada |
| | Cyprus |
| | Czech Republic |
| | England[1,2] |
| | Greece |
| | Hong Kong |
| | Iceland |
| | Iran, Islamic Republic |
| | Ireland |
| | Japan |
| | Korea |
| | New Zealand |
| | Norway |
| | Portugal |
| | Scotland[2] |
| | Singapore |
| | United States |
| Countries not satisfying guidelines for sample participation rates | Australia |
| | Austria |
| | Latvia (LSS)[3] |
| | Netherlands |
| Countries not meeting age/grade specifications | Slovenia |
| Countries with unapproved sampling procedures at the classroom level and/or not meeting other guidelines | Hungary |
| | Israel[3] |
| | Kuwait |
| | Thailand |

[1] National defined population covers less than 90 percent of national desired population.

[2] Met guidelines for sample participation rates only after replacement schools were included

[3] National desired population does not cover all of the international desired population. Latvia is noted LSS for Latvian-speaking schools only

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# Note 7: The Third International Mathematics and Science Study (TIMSS)

**Continued**

**Table 4 Countries participating in TIMSS, by compliance with sampling guidelines for Population 2**

| Compliance with sampling guidelines | Countries |
|---|---|
| Countries satisfying guidelines for sample participation rates, grade selection, and sampling procedures | Belgium (Flemish)[1] |
| | Canada |
| | Cyprus |
| | Czech Republic |
| | England[1,2] |
| | France |
| | Hong Kong |
| | Hungary |
| | Iceland |
| | Iran, Islamic Republic |
| | Ireland |
| | Japan |
| | Korea |
| | Latvia (LSS)[3] |
| | Lithuania[3] |
| | New Zealand |
| | Norway |
| | Portugal |
| | Russian Federation |
| | Singapore |
| | Slovak Republic |
| | Spain |
| | Sweden |
| | Switzerland[3] |
| | United States[1] |
| Countries not satisfying guidelines for sample participation rates | Australia |
| | Austria |
| | Belgium (French) |
| | Bulgaria |
| | Netherlands |
| | Scotland |
| Countries not meeting age/grade specifications | Colombia |
| | Germany[1,3] |
| | Romania |
| | Slovenia |
| Countries with unapproved sampling procedures at the classroom level and/or not meeting other guidelines | Denmark |
| | Greece |
| | Israel[3] |
| | Kuwait |
| | South Africa |
| | Thailand |

[1] Met guidelines for sample participation rates only after replacement schools were included.

[2] National defined population covers less than 90 percent of national desired population.

[3] National desired population does not cover all of the international desired population. Latvia is noted LSS for Latvian-speaking schools only.

# Note 7: The Third International Mathematics and Science Study (TIMSS)

**Continued**

**Table 5 Countries participating in TIMSS, by compliance with sampling guidelines for Population 3—General Knowledge**

| Compliance with sampling guidelines | Countries |
|---|---|
| Countries satisfying guidelines for sample participation rates and sampling procedures | Cyprus[1] |
| | Czech Republic |
| | Hungary |
| | Lithuania[2] |
| | New Zealand[3] |
| | Russian Federation[1] |
| | Sweden |
| | Switzerland |
| Countries not satisfying guidelines for sample participation rates | Australia |
| | Austria[1] |
| | Canada |
| | France |
| | Iceland |
| | Italy[2] |
| | Norway |
| | United States |
| Countries with unapproved sampling procedures and/or low participation rates | Denmark |
| | Germany[3] |
| | Netherlands[1] |
| | Slovenia |
| | South Africa |

[1] National defined population covers less than 90 percent of national desired population.

[2] National desired population does not cover all of the international desired population.

[3] Met guidelines for sample participation rates only after replacement schools were included.

# Note 7: The Third International Mathematics and Science Study (TIMSS)

**Continued**

**Table 6 Countries participating in TIMSS, by compliance with sampling guidelines for Population 3—Advanced Mathematics**

| Compliance with sampling guidelines | Countries |
|---|---|
| Countries satisfying guidelines for sample participation rates and sampling procedures | Canada |
| | Cyprus[1] |
| | Czech Republic |
| | France |
| | Germany[2] |
| | Greece[2] |
| | Lithuania[1] |
| | Russian Federation[1] |
| | Sweden |
| | Switzerland |
| Countries not satisfying guidelines for sample participation rates | Australia |
| | Austria[1] |
| | Italy[3] |
| | United States |
| Countries with unapproved sampling procedures and low participation rates | Denmark |
| | Slovenia |

[1] National defined population covers less than 90 percent of national desired population.

[2] Met guidelines for sample participation rates only after replacement schools were included.

[3] National desired population does not cover all of the international desired population.

**Table 7 Countries participating in TIMSS, by compliance with sampling guidelines for Population 3—Physics**

| Compliance with sampling guidelines | Countries |
|---|---|
| Countries satisfying guidelines for sample participation rates and sampling procedures | Canada |
| | Cyprus[1] |
| | Czech Republic |
| | France |
| | Germany[2] |
| | Greece[2] |
| | Latvia (LSS)[3] |
| | Norway[2] |
| | Russian Federation[1] |
| | Sweden |
| | Switzerland |
| Countries not satisfying guidelines for sample participation rates | Australia |
| | Austria[1] |
| | United States |
| Countries with unapproved sampling procedures and low participation rates | Denmark |
| | Slovenia |

[1] National defined population covers less than 90 percent of national desired population.

[2] Met guidelines for sample participation rates only after replacement schools were included.

[3] National desired population does not cover all of the international desired population. Latvia is noted LSS for Latvian-speaking schools only.

# Note 7: The Third International Mathematics and Science Study (TIMSS)

**Continued**

## VIDEOTAPE CLASSROOM STUDY

TIMSS also included a Videotape Classroom Study of 231 8th-grade classrooms selected to be representative of the classrooms in the main study (NCES 1999–074). The study examined the mathematical content of lessons, the organization and process of mathematics instruction, and teachers' beliefs about reform and how these beliefs related to instructional practices.

One hundred German classrooms, 81 U.S. classrooms, and 50 Japanese classrooms were included in the study. In each country, schools were randomly selected from the original TIMSS sample, and classrooms were then selected from these schools for videotaping. In the United States, one 8th-grade classroom was randomly selected from each school. Teachers received a $300 grant, the use of which was to be decided upon jointly with the principal. In Germany, the classroom in each school that participated in the TIMSS assessment was videotaped. A modest stipend was given to the teachers for their participation. In Japan, classrooms selected for the study were those that had not participated in the TIMSS assessment. Where there was more than one 8th-grade mathematics classroom that had not participated in the assessment, the principal chose which classroom would participate. In all three countries, if a teacher in the original sample of schools refused to be videotaped, then the school was dropped from the study.

Videotaping of U.S. and German classrooms was spread between October 1994 and May 1995. In Japan, the academic year begins in April, so all videotaping was conducted between November 1994 and March 1995. The national curriculum in Japan devotes the first half of the academic year to algebra and the second half of the year to geometry. Consequently, geometry lessons were overrepresented in the sample of lessons from Japanese classrooms. Five additional Japanese classrooms were sampled in the following school year to increase the number of Japanese algebra lessons and were included in the specialized analyses of the "Math Content Group."

After their classroom was videotaped, teachers were asked to complete a 28-item questionnaire. English, German, and Japanese versions of the questionnaire were created and judged to be equivalent by a group of researchers, each of whom was fluent in at least two of the languages. Over 90 percent of teachers in each country who were videotaped returned the questionnaire—91 percent in Germany, 94 percent in Japan, and 98 percent in the United States. Teachers were asked to describe the videotaped lesson, the typicality of that lesson, and their understanding of current reform efforts and to what extent these reforms were evident in the videotaped lesson.

# Note 8: NAEP, NELS, and HS&B Transcript Studies

*Indicators* 39 and 40 summarize data from transcripts of high school graduates collected as part of the U.S. Department of Education's National Assessment of Educational Progress (NAEP) and the High School & Beyond study (HS&B). Based on these transcripts, completed courses in subject areas (such as science and mathematics) are placed in different levels of an academic "pipeline." The pipeline organizes courses in each subject based on the normal progression and difficulty of courses within that subject area. In mathematics, as an illustration, algebra I is less difficult than and is traditionally taken before algebra II; thus, algebra I is placed lower in the pipeline hierarchy than is algebra II.

The pipeline for a subject can be used to assess the rigor and difficulty of courses that high school graduates have completed. Graduates at the high end of a pipeline have completed more advanced coursework than graduates at a lower level of the pipeline. The pipeline classifies graduates by the highest level courses completed in a subject area, not the highest level attempted.

## MATHEMATICS PIPELINE

The mathematics pipeline has eight levels: *No mathematics, Nonacademic, Low academic, Middle academic I, Middle academic II, Advanced I, Advanced II,* and *Advanced III.* Middle levels I and II and Advanced levels I, II, and III can be combined to create one middle level and one Advanced level, respectively, thus creating a five-level pipeline (*No mathematics, Nonacademic, Low academic, Middle academic, and Advanced*).

### No mathematics

Students who did not complete any courses in mathematics are placed in the no-mathematics level as are students who completed only basic or remedial-level mathematics. Thus, it is possible for a student to have taken one or more courses in mathematics but to be placed in the no-mathematics level.

### Non-academic

This level includes courses in "general mathematics" or "basic skills mathematics," such as:

General mathematics I or II; basic mathematics I, II, or III; consumer mathematics; technical or vocational mathematics; and mathematics review.

### Low academic

This level includes preliminary courses (e.g., pre-algebra) or mathematics courses of reduced rigor or pace (e.g., algebra I taught over the course of 2 academic years). These courses are considered to be more rigorous than Nonacademic courses and include:

Pre-algebra; algebra I, part I; algebra I, part II; and geometry (informal).

### Middle academic

Courses at this level begin with algebra I (or unified mathematics I) and include approximately three full-year courses in mathematics (e.g., algebra I and II and geometry). The Middle academic pipeline is divided into sublevels according to their rigor (Middle academic I and II). These courses are more rigorous than Nonacademic and Low academic level courses.

### Middle academic level I

Algebra I; plane geometry; plane and solid geometry; unified mathematics I and II; pure mathematics; other.

### Middle academic level II

Algebra II and unified mathematics III.

# Note 8: NAEP, NELS, and HS&B Transcript Studies

**Continued**

## ADVANCED ACADEMIC

Advanced academic courses include precalculus and calculus as well as other courses labeled as "advanced," including trigonometry, statistics, and probability. These courses are considered more rigorous than Nonacademic, Low-academic, and Middle academic courses. Advanced courses are divided into three pipeline levels according to their rigor:

### Advanced academic level I (least rigorous)

Algebra III; algebra/trigonometry; algebra/analytical geometry; trigonometry; trigonometry/solid geometry; analytical geometry; linear algebra; probability; probability/statistics; statistics; statistics (other); and independent study.

### Advanced academic level II

Precalculus and introduction to analysis.

### Advanced academic level III (most rigorous)

Advanced Placement calculus; calculus; and calculus/analytical geometry.

## SCIENCE PIPELINE

Unlike mathematics and other subjects such as foreign languages, coursework in science does not follow a common or easily defined sequence. Depending on a school's curriculum, students may be able to choose from several courses with minimal sequencing. Consequently, the method used to construct the science pipeline differs from that of the mathematics pipeline. First, all science courses were placed in one of four groups based on subject matter: (1) life science (biology); (2) chemistry; (3) physics; and (4) all other physical sciences (e.g., geology, earth science, physical science). Second, a pipeline was constructed for each of these four groups. Third, the pipelines for chemistry, physics, and all other physical sciences were combined into a single pipeline (a physical science pipeline). Finally, the physical science and life science pipelines were combined to create a single pipeline measure. The result is a pipeline with seven levels: *No science; Primary physical science; Secondary physical science; Biology; Chemistry I or Physics I; Chemistry I and Physics I; and Chemistry II or Physics II.*

### No science

Students who did not complete any courses in science are in this category as are students who completed only basic or remedial-level science. Thus, it is possible for a student to have taken one or more courses in science but to be placed in the no-science level.

### Primary physical science

Physical science; applied physical science; earth science; college preparatory earth science; and unified science.

### Secondary physical science

Astronomy; geology; environmental science; oceanography; general physics; basic biology I; and consumer or introductory chemistry.

### Biology

General biology I; secondary life sciences (including ecology, zoology, marine biology, and human physiology); general or honors biology II; and advanced biology.

### Chemistry I or Physics I

### Chemistry I and Physics I

### Chemistry II or Physics II

For more information on the construction of the pipelines, see Burkam, Lee, and Smerdon 1997.

# Note 9: The College Qualification Index

## WHO IS PREPARED FOR COLLEGE?

The college qualification index was developed for *Access to Postsecondary Education for the 1992 High School Graduates* (NCES 98–105). The index measures a student's readiness to attend a 4-year institution and uses up to five sources of information about a student's preparation: high school grade-point average (GPA) in academic courses, senior class rank, scores on the NELS 1992 cognitive test battery, and scores on the ACT or SAT college entrance examination. Since admission standards and requirements vary widely among 4-year colleges and universities, the analysis for the indicator examined the actual distribution of these five measures of academic aptitude and achievement among those graduating seniors who did attend a 4-year institution. Approximately half (45 percent) of the NELS graduating seniors had data available for four or five of the criteria: class rank, GPA, the NELS test, and ACT or SAT scores. For about one-third of the students only three data sources were available because they lacked ACT or SAT scores. All of these students had NELS test scores, however. In order to identify as many students as possible who were potentially qualified academically to attend a 4-year college, students were assigned the highest level of qualification yielded by any of the five criteria that were available.

Students were classified in a two-stage process. The initial classification was determined as follows:

- *Very highly qualified:* those whose highest value on any of the five criteria would put them among the top 10 percent of 4-year college students (specifically the NELS 1992 graduating seniors who enrolled in 4-year colleges and universities) for that criterion. Minimum values were GPA=3.7, class rank percentile=96, NELS test percentile=97, combined SAT=1250, composite ACT=28.
- *Highly qualified:* those whose highest value on any of the five criteria would put them among the top 25 percent of 4-year college students (but not the top 10 percent) for that criterion. Minimum values were GPA=3.6, class rank percentile=89, NELS test percentile=90, combined SAT=1110, composite ACT=25.
- *Somewhat qualified:* those whose highest value on any of the five criteria would put them among the top 50 percent (but not the top 25 percent, i.e., in the second quartile) of 4-year college students for that criterion. Minimum values were GPA=3.2, class rank percentile=75, NELS test percentile=76, combined SAT=960, composite ACT=22.
- *Minimally qualified:* those whose highest value on any of the five criteria would put them among the top 75 percent (but not the top 50 percent, i.e., in the third quartile) of 4-year college students for that criterion. Minimum values were GPA=2.7, class rank percentile=54, NELS test percentile=56, combined SAT=820, composite ACT=19.
- *Marginally or not qualified:* those who had no value on any criterion that would put them among the top 75 percent of 4-year college students (i.e., all values were in the lowest quartile). In addition, those in vocational programs (according to their high school transcript) were classified as not college qualified.

Next, adjustments were made for programs of rigorous academic coursework, defined as including at least 4 years of English; 3 years each of science, mathematics, and social studies; and 2 years of a foreign language. Those who had

## Note 9: The College Qualification Index

**Continued**

taken a program of rigorous academic courses were moved into one higher level of qualification. Students initially placed in the "very highly qualified" category who had not taken the rigorous academic coursework were placed into the "highly qualified" category.

Students were identified as "college qualified" if they were at least minimally qualified according to this index. It is important to recognize that some "marginally or not qualified" students enrolled at a 4-year institution. Admission standards vary widely and admission may be based on factors other than academic preparation (for example, some public 4-year institutions are open to any in-state high school graduate).

NOTE: This procedure affected the classification of less than 1 percent of students. Few students in vocational programs met any of the criteria for a higher classification.

# Note 10: College Remediation and Degree Completion

The source of student transcripts used in *Indicator 34* is the U.S. Department of Education's High School and Beyond Postsecondary Transcript File. Courses defined as remedial include: precollege mathematics, arithmetic-based business mathematics, remedial writing, remedial speech, basic reading (but not speed reading), business English: punctuation and grammar, English-as-a-second language, and basic academic skills. For a description of how courses were coded from the High School and Beyond Postsecondary Transcript File, see Adelman (1999).

In the analysis, students were assigned to one of five mutually exclusive patterns of remedial coursework, according to the courses on their transcripts. These patterns followed a logical cascade. Students with (a) any remedial courses were first identified, then (b) students with two or fewer remedial mathematics courses only, then (c) students with two or more courses in English, mathematics, or other courses other than reading (but not solely two courses in mathematics), then (d) students with only one remedial course other than reading or mathematics, and, finally, (e) students with no remedial courses.

# Note 11: Information on Socioeconomically Disadvantaged Students

For *Indicator 35*, which uses data from the 1996 Beginning Postsecondary Student Longitudinal Study, "First Follow-up" (BPS:1996/1998), students are classified as "at risk" of not persisting at a 4-year institution if they meet one or more of the criteria listed below. Note that this definition of "at risk" is specific to this indicator and differs from definitions of at risk used in other NCES publications. Each of the three components is independently related to persistence. Students were at risk if:

- Their total family income in 1994 was below 125 percent of the federal poverty level for their family size. (In BPS:1996/1998, family income was derived from national student loan files, student and parent interviews, and imputation.) Sixty-three percent of students from low-income families persisted versus 76 percent of students from other families.
- The highest educational level completed by either parent was a high school diploma or less. These data were obtained primarily from the BPS telephone interviews. Sixty-three percent of students whose parents did not go beyond high school persisted versus 78 percent of other students.
- The proportion of the student body in the student's high school who were eligible for free or reduced-price lunch in 1994–95 was 25 percent or more. This information was obtained by matching high schools identified by admission test takers with the NCES Common Core of Data (CCD). In 1994–95, 10 states did not report free-lunch eligibility data for at least 70 percent of their schools. Students missing data on this criterion could be categorized as "at risk" based on family income or parents' education. Eligibility for free or reduced-price lunch under the national Free School Lunch Act is one of four measures of poverty specified in the basic program requirements for Title I federal funding. Because only public high schools are included in the CCD, and the NCES Private School Survey does not collect free or reduced-price lunch eligibility data, attendance at a private high school could not solely be the basis of "at-risk" status. However, students who attended private high schools could be classified as "at risk" based on family income or parents' education. (Ninety percent of the BPS:1996/1998 sample graduated from public high schools, and among students entering 4-year institutions, which are the focus of this indicator, 86 percent graduated from public high schools.) Seventy-two percent of students from high poverty high schools persisted versus 78 percent of other students.

Among students entering 4-year institutions, 44 percent were at risk of not persisting. Each of the three variables considered is associated with persistence as defined in this indicator, and does not highly overlap with the other two variables, as indicated below.

# Note 11: Information on Socioeconomically Disadvantaged Students

**Continued**

**Percentage distribution according to responses to variables determining at-risk status for nonpersistence for students with complete data on all three variables**

| | |
|---|---|
| Only low family income (as a percent of the poverty level) | 12.2% |
| Only low parents' education | 32.2% |
| Only high percent free lunch eligible (high school) | 22.0% |
| Both low family income and low parents' education | 7.7% |
| Both low family income and high percent free lunch eligible | 6.3% |
| Both low parents' education and high percent free lunch eligible | 11.1% |
| At risk on all three variables | 8.6% |
| Total | 100.0% |

# Note 12: Fields of Study

## DEFINITIONS OF FIELDS OF STUDY

Following the procedure used in the *Digest of Education Statistics*, the fields in each category in *Indicator 37* are based on the 1991–92 Classification of Instructional Program (CIP) codes, 1990 edition, in order to provide consistent data for 1970–71 and 1996–97.

*Agriculture and natural resources:* agricultural business and production; agricultural sciences; and conservation and renewable natural resources.

*Biological/life sciences:* biology; biochemistry and biophysics; botany; cell and molecular biology; microbiology/bacteriology; zoology; and other biological sciences.

*Business management and administrative services:* business management/administrative services; marketing operations/marketing distribution; and consumer and personal services.

*Communications:* communications, general; advertising; journalism; broadcast journalism; public relations and organizational communications; radio and television technology; communications, other; and communications technologies.

*Computer and information sciences:* computer and information sciences, general; computer programming; data processing technology/technician; information science and systems; computer systems analysis; and other information sciences.

*Education:* education.

*Engineering:* engineering; engineering-related technologies; mechanics and repairs; and construction trades.

*English language and literature/letters:* English language and literature, general; comparative literature; English composition; English creative writing; literature; creative American literature; English literature, speech and rhetorical studies; English technical and business writing; and English language and literature/letters, other.

*Health professions and related sciences:* Communication disorders sciences; community health liaison; dentistry; dental services; health services administration; health and medical assistants; health and medical diagnosis and treatment services; medical laboratory technologies; predentistry; premedicine; prepharmacy; preveterinary; medicine; medical basic sciences; mental health services; nursing; optometry; pharmacy; epidemiology; rehabilitation and therapeutic services; veterinary medicine; and other health professions.

*Mathematics:* mathematics; statistics.

*Physical sciences:* physical sciences, general; astronomy; astrophysics; atmospheric science and meteorology; chemistry; geology; miscellaneous physical sciences; physics; science technologies; and other physical sciences.

*Psychology:* psychology.

*Social sciences and history:* social sciences, general; anthropology; archeology; criminology; demography and population studies; economics; geography; history; international relations and affairs; political science and government; sociology; urban affairs/studies; and social sciences and history, other.

*Visual and performing arts:* visual and performing arts, general; crafts, folk art, and artisanry; dance; design and applied art; theatre arts and stagecraft; film/video and photographic arts; fine arts and art studies; music; and visual and performing arts, other.

# Note 13: Allocation of Faculty Time

The National Study of Postsecondary Faculty (NSOPF–93), conducted in 1992–93, included anyone who was designated as faculty, whether or not their responsibilities included instruction, and other personnel with instructional responsibilities. The analysis for *Indicator 56* includes only those respondents with faculty status and some instructional responsibilities. Instructional responsibilities include teaching one or more classes for credit or advising or supervising students' academic activities.

## TIME ALLOCATION

Survey respondents were asked to estimate the percentage of total working hours they spent on each of the following activities:

*Teaching:* Includes teaching; grading papers; preparing courses; developing new curricula; advising or supervising students; or working with student organizations or intramural sports.

*Research/scholarship:* Includes research; reviewing or preparing articles or books; attending or preparing for professional meetings or conferences; reviewing proposals; seeking outside funding; giving performances or exhibitions in the fine or applied arts; or giving speeches.

*Administration:* Performing managerial or other organizationally supportive activities.

*Professional growth:* Includes taking courses or pursuing an advanced degree or other professional development activities to remain current in their field of practice.

*Outside consulting or freelance work:* Conducting outside consulting or other employment.

*Service/other:* Includes providing legal or medical service or psychological counseling to clients or patients; providing paid or unpaid community or public service, or service to professional societies/associations; or participating in other activities or work not listed above.

The last three activities on this list were combined into an "other" category for the indicator.

# Note 14: Calculation of Indicators of Public Effort to Fund Education

Many indices of public investment in education could be constructed. Choosing the most appropriate measure has been an issue in international comparisons as well as national trends. Two indices were selected for presentation in *Indicator 62*. The first is revenue per student, which is the amount of public revenue for elementary and secondary education divided by the total number of public and private elementary and secondary students, or public revenues for postsecondary education in degree-granting institutions divided by the total number of postsecondary education students enrolled in postsecondary degree-granting institutions. Education revenue is in 1998 dollars, based on the Consumer Price Index (CPI), prepared by the Bureau of Labor Statistics, U.S. Department of Labor, adjusted to a school-year basis. Personal income is in constant 1998 dollars, adjusted by CPI for the calendar year. Data for the indicators are for the calendar year in which the school year ended, except for 1930 and 1940, for which the data are for the calendar year in which the school year began.

The second indicator is revenue per student divided by per capita personal income. This indicator of public effort provides a measure of public investment in each student compared with available societal resources. Public education revenue per student is the ratio of total public revenue for education to public and private enrollment. No adjustments were made for part-time enrollment. Per capita income is the ratio of total personal income to total population. The index can be expressed algebraically, therefore, as:

$$\text{Effort index} = \frac{\text{Public revenue for education/} \atop \text{total enrollment}}{\text{Total personal income/} \atop \text{total population}} \times 100$$

Revenue data from elementary/secondary and postsecondary education are based in different accounting systems and are not entirely comparable. For example, elementary and secondary public revenues represent additions to assets (cash) from taxes, appropriation, and other funds, which do not incur an obligation that must be met at some future date (loans) in all public schools. These include revenues that are spent on construction of buildings and other investments in the physical plant. Because of the difficulty in constructing a comparable time series, public funds going to private schools (for Head Start, disabled children, etc.) have been excluded. For postsecondary education, educational and general public revenues are those available from public sources at both public and private institutions for the *regular or customary activities* of an institution that are part of, and contributory to, or necessary to its instructional or research program. These include salaries and travel of faculty and administrative or other employees; purchase of supplies or materials for current use in classrooms, libraries, laboratories, or offices; and operation and maintenance of the educational plant. In contrast to elementary/secondary public revenues, postsecondary education public revenues, as defined in this indicator, do not include public funds that would be used for expansion of the physical plant. As a result, the reader should focus on the changes over time within the elementary/secondary and postsecondary education measures rather than make comparisons across levels.

To facilitate comparisons between the two indicators of public effort, the data shown in the figures were calculated as a percentage of their values in 1970.

# Note 15: Analysis of Variance (ANOVA)

The method used for comparisons of average values of three or more groups is called the *analysis of variance* (ANOVA). Using ANOVA the total variation can be separated into two parts: (1) variation due to differences between groups and (2) variation due to differences within each group.

(1) Variation due to differences represents how far group means deviate from the overall sample mean. In order to calculate the variation across groups, the difference between a group mean and the overall sample mean is calculated for each group. The differences are then squared and summed up using all the groups. Finally, the sum of the squared differences is multiplied by the number of subjects in each group. The resulting product of this calculation is called the *sum of squares between (among) groups* in the ANOVA table (see below).

(2) Variation due to differences within each group represents how much individual scores within each group differ from their group mean. In order to calculate the variation within groups, the differences between an individual score and its group mean are squared and summed using all the individuals within each group. Finally, the sums of the squared differences of all the groups are added. The resulting product is called the *sum of squares within groups* in the ANOVA table.

Dividing the average sum of squares between groups (also called the *mean square between groups* in the ANOVA table) by the average sum of squares within group (called the *mean square within groups*) yields an F-value. The F-value is used to test the differences in mean values of three or more groups. If the variation among the groups is large compared to the variation within the groups, then the F-value will be larger than 1. If the null hypothesis is true, the expected value for the two *mean squares* will be equal, and the F-value will be equal to 1.

*Indicator 64* applies ANOVA table for the percentage distributions of disparity among states and within states in the chart were calculated by dividing among-state disparity (*sum of squares among states*) by the total disparity (*total sum of squares*) and by dividing within-state disparity (*sum of squares within states*) by the total disparity, respectively, for each year. The proportions of the total disparity attributable to within- and among-state differences identify the sources and the shares of the total disparity.

While the universe of school districts was surveyed for each state in 1992–93, 1995–96, and 1996–97, a sample of school districts was collected for some states while a universe was collected for others in 1993–94 and 1994–95.

# Note 15: Analysis of Variance (ANOVA)

**Continued**

**Supplemental Table: Analysis of variance (ANOVA) results for instructional expenditures per pupil: School years 1992–93 to 1996–97**

| Year and source | Degree of freedom | Sum of squares | Mean square | F-value | Prob > F |
|---|---|---|---|---|---|
| 1992–93 | | | | | |
| Among states | 50 | 9149.80 | 183.00 | 255.60 | 0.0000 |
| Within states | 10631 | 7611.11 | 0.72 | | |
| Total | 10681 | 16760.91 | | | |
| 1993–94 | | | | | |
| Among states | 50 | 8679.22 | 173.58 | 224.54 | 0.0000 |
| Within states | 9374 | 7246.65 | 0.77 | | |
| Total | 9424 | 15925.87 | | | |
| 1994–95 | | | | | |
| Among states | 50 | 7831.17 | 156.62 | 304.34 | 0.0000 |
| Within states | 9427 | 4851.52 | 0.51 | | |
| Total | 9477 | 12682.70 | | | |
| 1995–96 | | | | | |
| Among states | 50 | 8133.99 | 162.68 | 321.75 | 0.0000 |
| Within states | 10520 | 5318.95 | 0.51 | | |
| Total | 10570 | 13452.95 | | | |
| 1996–97 | | | | | |
| Among states | 50 | 8143.33 | 162.87 | 312.24 | 0.0000 |
| Within states | 10522 | 5488.30 | 0.52 | | |
| Total | 10572 | 13631.64 | | | |

NOTE: Only unified school districts are included in the analysis. The school year Consumer Price Index (CPI) was used to adjust expenditures to constant 1996 dollars. Details may not add to totals due to rounding.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Elementary-Secondary School District Finance Data Files, 1992–93 to 1996–97 school years.

# Note 16: Net Price of College Attendance

The following definitions, used in *Indicator 67*, clarify who or what is included or excluded in the various statistics. The sample consists of dependent full-time, full-year students who attended one postsecondary institution during the 1995–96 academic year. During that year, approximately 20 percent of all undergraduates were dependent and full time, full year (defined as 8 or more months of attendance). The specific terms used in the Indicator are as follows:

*Family income:* The four income categories, "low income," "lower middle," "upper middle," and "high income" are calculated on the basis of family income for dependent students and correspond to the four quartiles of the distribution of parental family income. The quartile cutpoints for dependent student income are about $25,000, $47,000, and $71,000.

*Dependency status*: Students were considered dependent for purposes of federal financial aid programs unless institutional records indicated they were:

(1) Age 24 or older as of December 31, 1995 (born before January 1, 1972)

(2) A veteran of the U.S. Armed Forces

(3) Enrolled in a graduate or professional program (beyond a bachelor's degree) in 1995–96

(4) Married

(5) Orphan or ward of the court

(6) Had legal dependents, other than spouse

If any of these conditions were met, the student was classified as independent for purposes of financial aid.

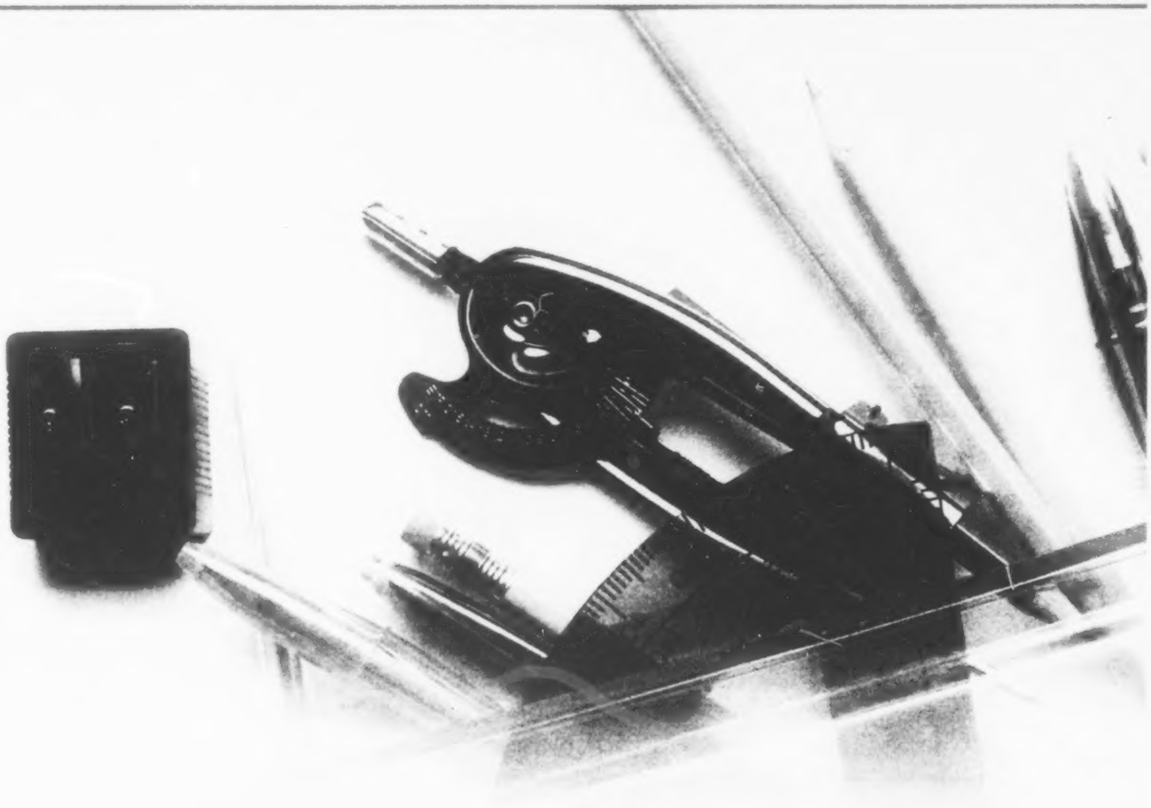
*Tuition and fees*: Indicates tuition the student was charged for the academic year, as reported by the institution in the National Postsecondary Student Aid Study (NPSAS). If tuition was not reported, tuition was estimated based on the average per credit or per term charges for other students at the institution according to their class level, degree program, and attendance status.

*Total cost*: The attendance-adjusted student budget at the sampled NPSAS institution for students who attended only one institution during 1995–96. The student budget is the sum of tuition and fees and the sum of nontuition expenses, including room and board, transportation, books and supplies, and other costs. For students attending at least half time but less than full time, nontuition costs are reduced to 75 percent of the allowance for full-time, full-year students, to 50 percent for students with unknown attendance status, and to 25 percent for students attending less than half time. The actual tuition is added to the estimated nontuition costs. Students who attended more than one institution are excluded from the tables.

*Grants*: Total amount of all grants and scholarships: federal, state, institutional, and other received during 1995–96, including employer tuition reimbursements.

*Net price*: Total cost to student, which includes tuition and fees and nontuition costs) minus total grants. Net price does not include the future cost of interest payments on loans that must be repaid. This definition of net price differs from an earlier version that appeared in *The Condition of Education 1998*. The 1998 definition was total cost minus total aid, which includes loans that students or their families must repay. The present definition more accurately reflects the price that students and their families pay.

# Appendix 3
# Standard Error Tables



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# Standard Errors

The information presented in this report was obtained from many sources, including federal and state agencies, private research organizations, and professional associations. The data were collected using many research methods, including surveys of a universe (such as all school districts) or of a sample, compilations of administrative records, and statistical projections. Users of *The Condition of Education* should take particular care when comparing data from different sources. Differences in procedures, timing, phrasing of questions, interviewer training, and so forth mean that the results are not strictly comparable. Following the general discussion of data accuracy below, descriptions of the information sources and data collection methods are presented, grouped by sponsoring organization. More extensive documentation of procedures used in one survey as compared to another does not imply more problems with the data, only that more information is available.

Unless otherwise noted, all statements cited in the text were tested for statistical significance and are statistically significant at the 0.05 level. Several test procedures were used. The procedure used depended upon the type of data interpreted and the nature of the statement tested. The most commonly used test procedures were (1) *t*-tests, (2) multiple *t*-tests with a Bonferroni adjustment to the significance level, and (3) linear trend tests. When a simple comparison between two sample estimates was made, for example, between males and females, a *t*-test was used. When multiple comparisons between more than two groups were made, and even if only one comparison is cited in the text, a Bonferroni adjustment to the significance level was made to ensure that the significance level for the tests as a group was at the 0.05 level. The Bonferroni adjustment is commonly used when making comparisons between racial/ethnic groups and between the United States and other countries. A linear trend test was used when a statement describing a trend, such as the growth of enrollment rates over time, was made or when a statement describing a relationship, such as the relationship between a parent's educational attainment and a student's reading proficiency, was made.

The accuracy of any statistic is determined by the joint effects of "sampling" and "nonsampling" errors. Estimates based on a sample will differ somewhat from the figures that would have been obtained if a complete census had been taken using the same survey instruments, instructions, and procedures. In addition to such sampling errors, all surveys, both universe and sample, are subject to design, reporting, and processing errors due to nonresponse. To the extent possible, these nonsampling errors are kept to a minimum by methods built into the survey procedures; however, the effects of nonsampling errors are more difficult to gauge than those produced by sampling variability.

The estimated standard error of a statistic is a measure of the variation due to sampling and can be used to examine the precision obtained in a particular sample. The sample estimate and an estimate of its standard error permit the construction of interval estimates with prescribed confidence that the interval includes the average result of all possible samples. If all possible samples were selected, and each was surveyed under the same conditions, and an estimate and its standard error were calculated from each sample, then approximately 90 percent of the intervals from 1.6 standard errors below the estimate to 1.6 standard errors above the estimate would include the actual value; 95 percent of the intervals from two standard errors below the estimate to two standard errors above the estimate would include the actual value; and 99 percent of all intervals from 2.5 standard errors below the estimate to 2.5 standard errors above the estimate would include the actual value. These intervals are called 90 percent, 95 percent, and 99 percent confidence intervals, respectively.

## Standard Errors

**Continued**

To illustrate this further, consider the supplemental table 1-1 for *Indicator 1* and the standard error table S1-1 for estimates from the Current Population Survey (CPS). For the 1998 estimate of the percentage of 3- to 5-year-olds enrolled in kindergarten (64.5 percent), table S1-1 shows a standard error of 0.7. Therefore, we can construct a 95 percent confidence interval from 63.1 to 65.9 (64.5 ± 2 x .07). If this procedure was followed for every possible sample, about 95 percent of the intervals would include the actual percentage of 3- to 5-year-olds enrolled in kindergarten.

The estimated standard errors for two sample statistics can be used to estimate the precision of the difference between the two statistics and to avoid concluding that there is an actual difference when the difference in sample estimates may only be due to sampling error. The need to be aware of the precision of differences arises, for example, when comparing mean proficiency scores between groups or years in the National Assessment of Educational Progress (NAEP) or when comparing percentages between groups or years in the Current Population Survey (CPS). The standard error (se) of the difference between sample estimate A and sample estimate B (when A and B do not overlap) is

$$se_{A-B} = \sqrt{se_A^2 + se_B^2}$$

When a ratio (called a *t*-statistic) of the difference between the two sample statistics and the standard error of the difference as calculated above is less than 2, one cannot be sure that the difference is not due only to sampling error, and caution should be taken in drawing any conclusions about the difference. In this report, for example, using the rationale above, we would not conclude that there is a difference between the two sample statistics. Some analysts, however, use the less restrictive criterion of a *t*-statistic value of 1.64, which corresponds to a 10 percent significance level.

To illustrate this further, consider the data on total enrollment of poor and nonpoor 3-year-old children in center-based programs or kindergarten in the supplemental table 2-2 for Indicator 2 and the associated standard error table S2-2. In 1999, the estimated total enrollment for poor 3-year-olds was 39.1 percent while for nonpoor 3-year-olds it was 48.2 percent. Is there enough evidence to conclude that the difference between these two samples represents an actual difference between poor and nonpoor enrollments for 3-year-olds in 1999? The standard errors are 3.2 and 1.5, respectively. Using the above formula, the standard error of the difference is calculated as 3.5. The ratio of the estimated difference of 9.1 percentage points to the standard error of the difference of 3.5 is 2.6. Using the table below, we see there is less than a 5 percent chance that the 9.1 percentage point difference is due only to sampling error, and one may conclude that there is a difference between enrollment rates in center-based programs or kindergarten for poor and nonpoor 3-year-olds in 1999.

Percent chance that a difference is due only to sampling error:

| | | | |
|---|---|---|---|
| *t*-statistic | 1.00 | 1.64 | 1.96 |
| Percent chance | 32 | 10 | 5 |

It should be noted that most of the standard errors presented in this report and in the original documents are approximations. That is, to derive estimates of standard errors that would applicable to a wide variety of items and that could be prepared at a moderate cost, a number of approximations were required. As a result, most of the standard errors presented provide a general order of magnitude rather than the exact standard error for any specific item.

The preceding discussion on sampling variability was directed toward a situation concerning one or two estimates. Determining the accuracy of statistical projections is more difficult.

## Standard Errors

**Continued**

In general, the further away the projection date is from the date of the actual data being used for the projection, the greater the possible error in the projection. If, for instance, annual data from 1980 to 1996 are used to project enrollment in elementary and secondary education, the further beyond one projects, the more variability in the projection. The enrollment projection for the year 2002 will be less certain than the projection for 2000. A detailed discussion of the projections methodology is contained in *Projections of Education Statistics to 2009* (NCES 1999–038).

Both universe and sample surveys are subject to nonsampling errors. Nonsampling errors can arise in various ways, including (1) from respondents or interviewers interpreting questions differently; (2) from respondents estimating the values that they provide; (3) from partial to total nonresponse; (4) from imputation or reweighting to adjust for nonresponse; (5) from inability or unwillingness on the part of respondents to provide correct information; (6) from recording or keying errors; or (7) from overcoverage or undercoverage of the target universe.

Sampling and nonsampling error combine to yield total survey error. Since estimating the magnitude of nonsampling errors would require special experiments or access to independent data, their magnitudes are seldom available. In almost all situations, the sampling error represents an underestimate of the total survey error, and thus an overestimate of the precision of the survey estimates.

To compensate for suspected nonrandom errors, adjustments of the sample estimates are often made. For example, adjustments are frequently made for nonresponse, both partial and total. An adjustment made for either type of nonresponse is often referred to as an imputation—substitution of the "average" questionnaire response for the nonresponse. Imputations are usually made separately within various groups of sample members, which have similar survey characteristics. Imputation for item nonresponse is usually made by substituting for a missing item the response to that item of a respondent having characteristics that are similar to those of the nonrespondent.

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# Educational Enrollment Rates, by Age

**Table S1-1** **Standard errors for the percentage of the population enrolled, by age and level: October 1970–98**

| October | Prekindergarten and kindergarten 3- to 5-year-olds | Elementary and secondary 6- to 17-year-olds | Postsecondary education institutions 18- to 24-year-olds | Postsecondary education institutions 25- to 34-year-olds |
|---|---|---|---|---|
| 1970 | 0.7 | 0.1 | 0.4 | 0.2 |
| 1971 | 0.7 | 0.1 | 0.4 | 0.2 |
| 1972 | 0.7 | 0.1 | 0.4 | 0.2 |
| 1973 | 0.7 | 0.1 | 0.4 | 0.2 |
| 1974 | 0.7 | 0.1 | 0.4 | 0.2 |
| 1975 | 0.8 | 0.1 | 0.4 | 0.2 |
| 1976 | 0.8 | 0.1 | 0.4 | 0.2 |
| 1977 | 0.8 | 0.1 | 0.4 | 0.2 |
| 1978 | 0.8 | 0.1 | 0.4 | 0.2 |
| 1979 | 0.8 | 0.1 | 0.4 | 0.2 |
| 1980 | 0.8 | 0.1 | 0.4 | 0.2 |
| 1981 | 0.8 | 0.1 | 0.4 | 0.2 |
| 1982 | 0.8 | 0.1 | 0.4 | 0.2 |
| 1983 | 0.8 | 0.1 | 0.4 | 0.2 |
| 1984 | 0.8 | 0.1 | 0.4 | 0.2 |
| 1985 | 0.8 | 0.1 | 0.4 | 0.2 |
| 1986 | 0.8 | 0.1 | 0.4 | 0.2 |
| 1987 | 0.8 | 0.1 | 0.4 | 0.2 |
| 1988 | 0.8 | 0.1 | 0.5 | 0.2 |
| 1989 | 0.8 | 0.1 | 0.5 | 0.2 |
| 1990 | — | 0.1 | 0.5 | 0.2 |
| 1991 | 0.8 | 0.1 | 0.5 | 0.2 |
| 1992 | 0.8 | 0.1 | 0.5 | 0.2 |
| 1993 | 0.8 | 0.1 | 0.5 | 0.2 |
| 1994 | 0.7 | 0.1 | 0.4 | 0.2 |
| 1995 | 0.7 | 0.1 | 0.4 | 0.2 |
| 1996 | 0.7 | 0.1 | 0.5 | 0.2 |
| 1997 | 0.7 | 0.1 | 0.5 | 0.2 |
| 1998 | 0.7 | 0.1 | 0.5 | 0.2 |

— Not applicable

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys, 1970–98.

# Educational Enrollment Rates, by Age

**Table S1-2** **Standard errors for the total population (in thousands) of people ages 3–34, by age and enrollment status: October 1970–98**

| | Prekindergarten and kindergarten | | Elementary and secondary | | Postsecondary | | | |
|---|---|---|---|---|---|---|---|---|
| | 3- to 5-year-olds | | 6- to 17-year-olds | | 18- to 24-year-olds | | 25- to 34-year-olds | |
| October | Enrolled | Not enrolled | Enrolled | Not enrolled | Enrolled | Not enrolled | Enrolled | Not enrolled |
| 1970 | 77.6 | 77.6 | 60.9 | 42.9 | 93.7 | 93.7 | 51.0 | 51.0 |
| 1971 | 77.0 | 77.0 | 60.4 | 42.5 | 96.6 | 96.6 | 55.2 | 55.2 |
| 1972 | 76.1 | 76.1 | 66.1 | 46.5 | 97.5 | 97.5 | 57.9 | 57.9 |
| 1973 | 76.6 | 76.6 | 68.9 | 48.4 | 96.8 | 96.8 | 59.0 | 59.0 |
| 1974 | 77.7 | 77.7 | 69.2 | 48.6 | 98.5 | 98.5 | 64.4 | 64.4 |
| 1975 | 77.2 | 77.2 | 65.8 | 46.3 | 102.1 | 102.1 | 68.0 | 68.0 |
| 1976 | 75.5 | 75.5 | 64.6 | 45.4 | 103.6 | 103.6 | 68.3 | 68.3 |
| 1977 | 74.5 | 74.5 | 65.3 | 45.9 | 104.9 | 104.9 | 73.0 | 73.0 |
| 1978 | 73.9 | 73.9 | 65.6 | 46.1 | 104.4 | 104.4 | 70.3 | 70.3 |
| 1979 | 73.9 | 73.9 | 65.4 | 46.0 | 104.6 | 104.6 | 71.7 | 71.7 |
| 1980 | 74.5 | 74.5 | 65.7 | 46.2 | 105.8 | 105.8 | 72.2 | 72.2 |
| 1981 | 76.1 | 76.1 | 62.4 | 43.8 | 108.0 | 108.0 | 75.1 | 75.1 |
| 1982 | 80.8 | 80.8 | 61.4 | 43.2 | 113.8 | 113.8 | 79.6 | 79.6 |
| 1983 | 82.2 | 82.2 | 58.2 | 40.9 | 112.6 | 112.6 | 80.9 | 80.9 |
| 1984 | 83.7 | 83.7 | 62.5 | 43.9 | 112.8 | 112.8 | 80.0 | 80.0 |
| 1985 | 83.9 | 83.9 | 60.4 | 42.5 | 111.8 | 111.8 | 80.7 | 80.7 |
| 1986 | 84.4 | 84.4 | 59.2 | 41.7 | 110.7 | 110.7 | 79.9 | 79.9 |
| 1987 | 84.4 | 84.4 | 62.8 | 44.1 | 111.5 | 111.5 | 79.8 | 79.8 |
| 1988 | 92.5 | 92.5 | 64.8 | 45.6 | 121.7 | 121.7 | 86.7 | 86.7 |
| 1989 | 92.6 | 92.6 | 65.6 | 46.1 | 121.2 | 121.2 | 88.3 | 88.3 |
| 1990 | — | — | 57.4 | 40.4 | 117.1 | 117.1 | 86.1 | 86.1 |
| 1991 | 90.5 | 90.5 | 56.7 | 39.9 | 117.6 | 117.6 | 87.6 | 87.6 |
| 1992 | 91.2 | 91.2 | 58.0 | 40.9 | 117.8 | 117.8 | 85.6 | 85.6 |
| 1993 | 92.9 | 92.9 | 57.5 | 40.5 | 117.1 | 117.1 | 85.2 | 85.2 |
| 1994 | 85.8 | 85.8 | 56.7 | 40.0 | 111.6 | 111.6 | 82.7 | 82.7 |
| 1995 | 86.1 | 86.1 | 63.6 | 44.7 | 110.6 | 110.6 | 81.8 | 81.8 |
| 1996 | 89.5 | 89.5 | 83.5 | 58.6 | 115.7 | 115.7 | 86.4 | 86.4 |
| 1997 | 86.8 | 86.8 | 63.4 | 44.6 | 117.3 | 117.3 | 84.3 | 84.3 |
| 1998 | 86.9 | 86.9 | 68.9 | 48.5 | 118.4 | 118.4 | 85.9 | 85.9 |

— Not applicable

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys, 1970–98.

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# Enrollment in Preprimary Education

**Table S2-1** **Standard errors for the percentage of 3-, 4-, and 5-year-olds enrolled in center-based programs or kindergarten, by student characteristics: 1991, 1993, 1995, 1996, and 1999**

| | 3-year-olds | | | | | 4-year-olds | | | | | 5-year-olds | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Student characteristic** | **1991** | **1993** | **1995** | **1996** | **1999** | **1991** | **1993** | **1995** | **1996** | **1999** | **1991** | **1993** | **1995** | **1996** | **1999** |
| **Total** | **1.4** | **1.2** | **1.5** | **1.4** | **1.3** | **1.0** | **1.1** | **1.5** | **1.4** | **1.3** | **0.8** | **0.8** | **0.7** | **0.9** | **0.8** |
| Race-ethnicity | | | | | | | | | | | | | | | |
| White | 1.5 | 1.5 | 2.4 | 2.1 | 1.7 | 1.2 | 1.5 | 1.9 | 1.8 | 1.6 | 0.8 | 0.9 | 0.8 | 1.1 | 1.0 |
| Black | 4.2 | 3.1 | 4.1 | 4.3 | 3.9 | 3.6 | 3.0 | 4.5 | 3.2 | 3.5 | 1.6 | 1.9 | 1.9 | 1.6 | 0.7 |
| Hispanic | 3.2 | 3.3 | 2.5 | 3.4 | 3.1 | 3.8 | 3.3 | 3.0 | 3.9 | 3.0 | 2.3 | 2.2 | 1.6 | 3.2 | 2.7 |
| Other | 6.3 | 6.0 | 7.1 | 7.0 | 6.6 | 5.8 | 5.4 | 5.6 | 7.8 | 5.5 | 5.7 | 3.9 | 1.6 | 2.5 | 1.6 |
| Household income | | | | | | | | | | | | | | | |
| $10,000 or less | — | 3.8 | 3.8 | 3.7 | 4.6 | — | 2.6 | 4.8 | 4.7 | 4.7 | — | 2.2 | 1.7 | 3.6 | 2.3 |
| 10,001–20,000 | — | 3.5 | 3.5 | 4.7 | 3.9 | — | 2.7 | 4.4 | 4.3 | 3.9 | — | 2.2 | 2.1 | 2.9 | 3.0 |
| 20,001–35,000 | — | 2.2 | 2.7 | 3.3 | 2.9 | — | 2.2 | 2.8 | 2.7 | 2.9 | — | 1.9 | 1.4 | 1.9 | 1.4 |
| 35,001–50,000 | — | 3.1 | 3.5 | 3.5 | 3.5 | — | 2.6 | 3.0 | 3.6 | 3.4 | — | 1.6 | 2.3 | 1.9 | 2.1 |
| 50,001 or more | — | 2.0 | 3.1 | 2.9 | 2.5 | — | 1.8 | 2.2 | 2.2 | 1.8 | — | 0.7 | 0.7 | 1.4 | 1.0 |
| Parents' highest education level | | | | | | | | | | | | | | | |
| Less than high school diploma | 3.5 | 3.4 | 4.8 | 5.9 | 6.0 | 4.3 | 4.6 | 5.8 | 5.1 | 4.9 | 2.3 | 4.1 | 2.0 | 4.7 | 3.0 |
| High school diploma or GED | 2.3 | 2.2 | 2.6 | 3.0 | 3.1 | 2.2 | 2.2 | 2.9 | 3.2 | 2.8 | 1.4 | 1.4 | 1.4 | 1.8 | 1.8 |
| Some college/vocational/technical | 2.0 | 2.0 | 2.8 | 2.7 | 2.5 | 1.7 | 1.9 | 2.6 | 2.4 | 2.7 | 1.3 | 1.4 | 1.4 | 1.8 | 1.5 |
| Bachelor's degree | 3.2 | 3.3 | 3.6 | 3.6 | 2.7 | 2.2 | 2.6 | 3.0 | 3.8 | 2.5 | 1.9 | 1.6 | 1.1 | 2.0 | 2.0 |
| Graduate/professional school | 3.0 | 2.8 | 5.1 | 4.3 | 3.4 | 3.2 | 2.8 | 3.2 | 3.5 | 2.3 | 1.8 | 1.3 | 1.8 | 2.4 | 1.2 |

— Not available.

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1991 (Early Childhood Education Component), 1993 (School Readiness Component), 1995 (Early Childhood Program Participation Component), 1996 (Parent and Family Involvement in Education Component), and 1999 (Parent Interview Component).

# Enrollment in Preprimary Education

Table S2-2 Standard errors for the percentage of 3-, 4-, and 5-year-olds enrolled in center-based programs, kindergarten, or center-based programs and kindergarten, by selected student characteristics: 1999

| | 3-year-olds | | | | 4-year-olds | | | | 5-year-olds | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Student characteristic | Total | Center-based programs | Kindergarten | Center-based and kindergarten | Total | Center-based programs | Kindergarten | Center-based and kindergarten | Total | Center-based programs | Kindergarten | Center-based and kindergarten |
| **Total** | **1.3** | **1.3** | **—** | **—** | **1.3** | **1.3** | **0.5** | **0.4** | **0.8** | **1.1** | **1.5** | **1.2** |
| Sex | | | | | | | | | | | | |
| Male | 1.9 | 1.9 | — | — | 2.0 | 2.1 | 0.6 | 0.5 | 1.1 | 1.6 | 2.1 | 1.8 |
| Female | 2.0 | 2.0 | — | — | 1.9 | 1.9 | 0.6 | 0.5 | 1.1 | 1.7 | 2.4 | 1.8 |
| Race-ethnicity | | | | | | | | | | | | |
| White | 1.7 | 1.8 | — | — | 1.6 | 1.5 | 0.5 | 0.6 | 1.0 | 1.5 | 2.1 | 1.6 |
| Black | 3.9 | 3.9 | — | — | 3.5 | 3.6 | 0.6 | 0.4 | 0.7 | 3.2 | 4.4 | 4.5 |
| Hispanic | 3.1 | 3.1 | — | — | 3.0 | 2.8 | 1.5 | 0.9 | 2.7 | 1.9 | 3.5 | 2.0 |
| Other | 6.6 | 6.4 | — | — | 5.5 | 5.4 | 2.4 | 0.6 | 1.6 | 6.7 | 7.0 | 4.2 |
| Household income | | | | | | | | | | | | |
| $10,000 or less | 4.6 | 4.6 | — | — | 4.7 | 4.6 | 1.3 | 1.3 | 2.3 | 3.9 | 5.6 | 4.9 |
| 10,001–20,000 | 3.9 | 3.9 | — | — | 3.9 | 4.0 | 1.2 | 0.4 | 3.0 | 3.1 | 4.5 | 2.4 |
| 20,001–30,000 | 2.9 | 3.0 | — | — | 2.9 | 2.9 | 0.7 | 0.2 | 1.4 | 2.4 | 3.2 | 3.1 |
| 30,001–50,000 | 3.5 | 3.6 | — | — | 3.4 | 3.4 | 1.1 | 0.8 | 2.1 | 2.8 | 3.1 | 2.0 |
| 50,001 or more | 2.5 | 2.6 | — | — | 1.8 | 1.9 | 1.0 | 0.6 | 1.0 | 2.0 | 2.6 | 1.9 |
| Parents' highest education level | | | | | | | | | | | | |
| Less than high school diploma | 6.0 | 6.1 | — | — | 4.9 | 5.0 | 1.4 | 1.9 | 3.0 | 3.8 | 5.1 | 3.0 |
| High school diploma or GED | 3.1 | 3.1 | — | — | 2.8 | 2.8 | 0.9 | 0.2 | 1.8 | 2.0 | 3.3 | 2.6 |
| Some college/vocational/technical | 2.5 | 2.4 | — | — | 2.7 | 2.8 | 0.8 | 0.6 | 1.5 | 2.3 | 3.4 | 2.5 |
| Bachelor's degree | 2.7 | 2.7 | — | — | 2.5 | 2.3 | 1.1 | 0.8 | 2.0 | 3.0 | 3.8 | 2.3 |
| Graduate/professional school | 3.4 | 3.7 | — | — | 2.3 | 2.6 | 1.3 | 0.9 | 1.2 | 3.4 | 4.1 | 2.9 |
| Poverty status | | | | | | | | | | | | |
| Poor | 3.2 | 3.3 | — | — | 3.6 | 3.5 | 1.2 | 0.8 | 2.0 | 2.6 | 3.8 | 3.1 |
| Nonpoor | 1.5 | 1.5 | — | — | 1.4 | 1.4 | 0.5 | 0.4 | 0.7 | 1.2 | 1.6 | 1.4 |
| Poverty status within race-ethnicity | | | | | | | | | | | | |
| White | | | | | | | | | | | | |
| Poor | 5.3 | 5.3 | — | — | 6.7 | 6.7 | 0.8 | 1.0 | 4.0 | 5.3 | 7.4 | 4.2 |
| Nonpoor | 1.9 | 1.9 | — | — | 1.6 | 1.5 | 0.6 | 0.6 | 0.9 | 1.5 | 2.2 | 1.9 |
| Black | | | | | | | | | | | | |
| Poor | 7.0 | 7.0 | — | — | 4.5 | 5.1 | 1.2 | — | 0.9 | 5.3 | 8.5 | 8.6 |
| Nonpoor | 4.7 | 4.7 | — | — | 5.0 | 4.9 | 0.7 | 0.7 | 1.1 | 4.0 | 4.6 | 4.8 |
| Hispanic | | | | | | | | | | | | |
| Poor | 5.0 | 5.0 | — | — | 5.8 | 5.7 | 2.8 | 2.1 | 5.7 | 3.6 | 6.3 | 2.7 |
| Nonpoor | 3.6 | 3.6 | — | — | 3.3 | 1.9 | 0.3 | — | 2.1 | 2.3 | 3.7 | 2.5 |

— Not applicable.

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Parent Interview Component).

# Past and Projected Elementary and Secondary School Enrollment

**Table S3-1** **Standard errors for private elementary and secondary school enrollment (in thousands), by region and grade level: School years 1989–90 to 1997–98**

| | | Region | | | |
|---|---|---|---|---|---|
| School year | Total | Northeast | Midwest | South | West |
| | | | Grades 1–12 | | |
| 1989–90 | 34 | 32 | 14 | 19 | 11 |
| 1991–92 | — | — | — | — | — |
| 1993–94 | 11 | 6 | 3 | 9 | 5 |
| 1995–96 | 16 | 6 | 6 | 7 | 9 |
| 1997–98 | 12 | 5 | 10 | 6 | 4 |
| | | | Grades 1–8 | | |
| 1989–90 | 28 | 29 | 11 | 16 | 8 |
| 1991–92 | — | — | — | — | — |
| 1993–94 | 9 | 4 | 3 | 8 | 4 |
| 1995–96 | 12 | 3 | 5 | 5 | 7 |
| 1997–98 | 11 | 5 | 9 | 4 | 3 |
| | | | Grades 9–12 | | |
| 1989–90 | 13 | 8 | 4 | 7 | 5 |
| 1991–92 | — | — | — | — | — |
| 1993–94 | 3 | 2 | 1 | 3 | 2 |
| 1995–96 | 5 | 3 | 1 | 2 | 2 |
| 1997–98 | 2 | 1 | 1 | 2 | 1 |

— Not available.

SOURCE: U.S. Department of Education, NCES. Private School Surveys (PSS), various years.

# Racial-Ethnic Distribution of Public School Students

Table S4-1 Standard errors for the racial-ethnic distribution of public school students enrolled in grades 1–12: October 1972–98

| October | White | Minority enrollment | | | |
|---|---|---|---|---|---|
| | | Total | Black | Hispanic | Other |
| 1972 | 0.3 | 0.3 | 0.3 | 0.2 | 0.1 |
| 1973 | 0.3 | 0.3 | 0.3 | 0.2 | 0.1 |
| 1974 | 0.3 | 0.3 | 0.3 | 0.2 | 0.1 |
| 1975 | 0.3 | 0.3 | 0.3 | 0.2 | 0.1 |
| 1976 | 0.3 | 0.3 | 0.3 | 0.2 | 0.1 |
| 1977 | 0.3 | 0.3 | 0.3 | 0.2 | 0.1 |
| 1978 | 0.3 | 0.3 | 0.3 | 0.2 | 0.1 |
| 1979 | — | — | — | — | — |
| 1980 | — | — | — | — | — |
| 1981 | 0.4 | 0.4 | 0.3 | 0.2 | 0.1 |
| 1982 | 0.4 | 0.4 | 0.3 | 0.2 | 0.1 |
| 1983 | 0.4 | 0.4 | 0.3 | 0.2 | 0.2 |
| 1984 | 0.4 | 0.4 | 0.3 | 0.2 | 0.2 |
| 1985 | 0.4 | 0.4 | 0.3 | 0.3 | 0.2 |
| 1986 | 0.4 | 0.4 | 0.3 | 0.3 | 0.2 |
| 1987 | 0.4 | 0.4 | 0.3 | 0.3 | 0.2 |
| 1988 | 0.4 | 0.4 | 0.3 | 0.3 | 0.2 |
| 1989 | 0.2 | 0.2 | 0.1 | 0.1 | 0.0 |
| 1990 | 0.4 | 0.4 | 0.3 | 0.3 | 0.2 |
| 1991 | 0.4 | 0.4 | 0.3 | 0.3 | 0.2 |
| 1992 | 0.4 | 0.4 | 0.3 | 0.3 | 0.2 |
| 1993 | 0.4 | 0.4 | 0.3 | 0.3 | 0.2 |
| 1994 | 0.4 | 0.3 | 0.3 | 0.2 | 0.1 |
| 1995 | 0.4 | 0.3 | 0.3 | 0.2 | 0.1 |
| 1996 | 0.4 | 0.4 | 0.3 | 0.2 | 0.2 |
| 1997 | 0.4 | 0.3 | 0.3 | 0.2 | 0.2 |
| 1998 | 0.4 | 0.4 | 0.3 | 0.2 | 0.2 |

— Not available

SOURCE: U.S. Department of Commerce, Bureau of the Census. October Current Population Surveys, 1972–98.

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# Racial-Ethnic Distribution of Public School Students

Table S4-2 Standard errors for the racial-ethnic distribution of public school students enrolled in grades 1–12, by region: October 1972–98

| | | Minority | | | | | Minority | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| October | White | Total | Black | Hispanic | Other | White | Total | Black | Hispanic | Other |
| | | | Northeast | | | | | Midwest | | |
| 1972 | 0.6 | 0.6 | 0.5 | 0.3 | 0.1 | 0.5 | 0.5 | 0.4 | 0.2 | 0.1 |
| 1973 | 0.6 | 0.6 | 0.5 | 0.3 | 0.1 | 0.5 | 0.5 | 0.4 | 0.1 | 0.1 |
| 1974 | 0.6 | 0.6 | 0.5 | 0.3 | 0.1 | 0.5 | 0.5 | 0.4 | 0.2 | 0.1 |
| 1975 | 0.6 | 0.6 | 0.5 | 0.3 | 0.1 | 0.5 | 0.5 | 0.5 | 0.2 | 0.1 |
| 1976 | 0.7 | 0.7 | 0.5 | 0.4 | 0.2 | 0.5 | 0.5 | 0.5 | 0.2 | 0.1 |
| 1977 | 0.7 | 0.7 | 0.6 | 0.4 | 0.2 | 0.5 | 0.5 | 0.5 | 0.2 | 0.1 |
| 1978 | 0.7 | 0.7 | 0.6 | 0.4 | 0.2 | 0.5 | 0.5 | 0.5 | 0.2 | 0.2 |
| 1979 | — | — | — | — | — | — | — | — | — | — |
| 1980 | — | — | — | — | — | — | — | — | — | — |
| 1981 | 0.7 | 0.7 | 0.6 | 0.4 | 0.2 | 0.6 | 0.6 | 0.5 | 0.2 | 0.2 |
| 1982 | 0.8 | 0.8 | 0.6 | 0.5 | 0.3 | 0.6 | 0.6 | 0.5 | 0.2 | 0.2 |
| 1983 | 0.8 | 0.8 | 0.7 | 0.5 | 0.3 | 0.6 | 0.6 | 0.6 | 0.2 | 0.2 |
| 1984 | 0.8 | 0.8 | 0.7 | 0.5 | 0.3 | 0.6 | 0.6 | 0.6 | 0.2 | 0.2 |
| 1985 | 0.8 | 0.8 | 0.7 | 0.6 | 0.3 | 0.7 | 0.7 | 0.6 | 0.3 | 0.3 |
| 1986 | 0.9 | 0.9 | 0.7 | 0.6 | 0.3 | 0.7 | 0.7 | 0.6 | 0.3 | 0.2 |
| 1987 | 0.8 | 0.8 | 0.7 | 0.6 | 0.3 | 0.7 | 0.7 | 0.6 | 0.3 | 0.3 |
| 1988 | 0.9 | 0.9 | 0.8 | 0.7 | 0.4 | 0.7 | 0.7 | 0.7 | 0.4 | 0.3 |
| 1989 | 1.0 | 1.0 | 0.8 | 0.7 | 0.4 | 0.5 | 0.5 | 0.5 | 0.1 | 0.1 |
| 1990 | 0.9 | 0.9 | 0.7 | 0.6 | 0.4 | 0.7 | 0.7 | 0.6 | 0.3 | 0.3 |
| 1991 | 0.9 | 0.9 | 0.7 | 0.6 | 0.4 | 0.7 | 0.7 | 0.6 | 0.3 | 0.3 |
| 1992 | 0.9 | 0.9 | 0.7 | 0.6 | 0.4 | 0.7 | 0.7 | 0.6 | 0.3 | 0.3 |
| 1993 | 0.9 | 0.9 | 0.7 | 0.6 | 0.4 | 0.7 | 0.7 | 0.6 | 0.3 | 0.3 |
| 1994 | 0.8 | 0.8 | 0.6 | 0.4 | 0.3 | 0.7 | 0.6 | 0.5 | 0.3 | 0.2 |
| 1995 | 0.8 | 0.8 | 0.6 | 0.4 | 0.3 | 0.6 | 0.6 | 0.5 | 0.2 | 0.2 |
| 1996 | 0.9 | 0.8 | 0.6 | 0.5 | 0.3 | 0.7 | 0.6 | 0.5 | 0.3 | 0.2 |
| 1997 | 0.9 | 0.8 | 0.6 | 0.5 | 0.3 | 0.7 | 0.6 | 0.5 | 0.3 | 0.3 |
| 1998 | 0.9 | 0.8 | 0.6 | 0.5 | 0.3 | 0.7 | 0.6 | 0.5 | 0.3 | 0.3 |

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## Racial-Ethnic Distribution of Public School Students

Table S4-2 Standard errors for the racial-ethnic distribution of public school students enrolled in grades 1–12, by region: October 1972–98—Continued

| | | Minority | | | | | Minority | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| October | White | Total | Black | Hispanic | Other | White | Total | Black | Hispanic | Other |
| | | | South | | | | | West | | |
| 1972 | 0.6 | 0.6 | 0.6 | 0.3 | 0.1 | 0.8 | 0.8 | 0.4 | 0.6 | 0.4 |
| 1973 | 0.6 | 0.6 | 0.6 | 0.3 | 0.1 | 0.8 | 0.8 | 0.4 | 0.6 | 0.4 |
| 1974 | 0.6 | 0.6 | 0.6 | 0.3 | 0.1 | 0.8 | 0.8 | 0.4 | 0.6 | 0.4 |
| 1975 | 0.6 | 0.6 | 0.6 | 0.3 | 0.1 | 0.8 | 0.8 | 0.4 | 0.6 | 0.4 |
| 1976 | 0.6 | 0.6 | 0.6 | 0.3 | 0.1 | 0.8 | 0.8 | 0.5 | 0.6 | 0.4 |
| 1977 | 0.6 | 0.6 | 0.6 | 0.3 | 0.1 | 0.8 | 0.8 | 0.5 | 0.6 | 0.4 |
| 1978 | 0.6 | 0.6 | 0.6 | 0.3 | 0.1 | 0.8 | 0.8 | 0.5 | 0.6 | 0.5 |
| 1979 | — | — | — | — | — | — | — | — | — | — |
| 1980 | — | — | — | — | — | — | — | — | — | — |
| 1981 | 0.6 | 0.6 | 0.6 | 0.3 | 0.2 | 0.8 | 0.8 | 0.4 | 0.6 | 0.5 |
| 1982 | 0.7 | 0.7 | 0.6 | 0.4 | 0.1 | 0.9 | 0.9 | 0.4 | 0.7 | 0.6 |
| 1983 | 0.7 | 0.7 | 0.6 | 0.4 | 0.2 | 0.9 | 0.9 | 0.4 | 0.7 | 0.6 |
| 1984 | 0.7 | 0.7 | 0.6 | 0.3 | 0.2 | 0.9 | 0.9 | 0.5 | 0.7 | 0.6 |
| 1985 | 0.7 | 0.7 | 0.6 | 0.4 | 0.2 | 0.9 | 0.9 | 0.5 | 0.8 | 0.5 |
| 1986 | 0.7 | 0.7 | 0.6 | 0.4 | 0.2 | 0.9 | 0.9 | 0.4 | 0.8 | 0.5 |
| 1987 | 0.7 | 0.7 | 0.6 | 0.4 | 0.2 | 0.9 | 0.9 | 0.5 | 0.8 | 0.5 |
| 1988 | 0.7 | 0.7 | 0.7 | 0.5 | 0.2 | 1.0 | 1.0 | 0.5 | 0.9 | 0.6 |
| 1989 | 0.5 | 0.5 | 0.5 | 0.2 | 0.1 | 0.9 | 0.9 | 0.3 | 0.7 | 0.3 |
| 1990 | 0.7 | 0.7 | 0.7 | 0.5 | 0.2 | 0.9 | 0.9 | 0.4 | 0.8 | 0.6 |
| 1991 | 0.7 | 0.7 | 0.7 | 0.4 | 0.2 | 0.9 | 0.9 | 0.4 | 0.8 | 0.5 |
| 1992 | 0.7 | 0.7 | 0.6 | 0.4 | 0.2 | 0.9 | 0.9 | 0.4 | 0.8 | 0.5 |
| 1993 | 0.7 | 0.7 | 0.6 | 0.4 | 0.2 | 0.9 | 0.9 | 0.4 | 0.8 | 0.5 |
| 1994 | 0.6 | 0.6 | 0.5 | 0.3 | 0.2 | 0.8 | 0.7 | 0.3 | 0.6 | 0.4 |
| 1995 | 0.6 | 0.6 | 0.5 | 0.3 | 0.2 | 0.8 | 0.7 | 0.3 | 0.6 | 0.4 |
| 1996 | 0.7 | 0.6 | 0.6 | 0.3 | 0.2 | 0.8 | 0.8 | 0.3 | 0.6 | 0.5 |
| 1997 | 0.7 | 0.6 | 0.5 | 0.3 | 0.2 | 0.8 | 0.7 | 0.4 | 0.6 | 0.5 |
| 1998 | 0.7 | 0.6 | 0.6 | 0.3 | 0.2 | 0.8 | 0.7 | 0.4 | 0.6 | 0.5 |

—Not available.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys, 1972–98.

# Parental Education, by Race-Ethnicity

Table S5-1 Standard errors for the percentage distribution of 6- to 18-year-olds according to parents' highest education level, by child's race-ethnicity: 1974–99

| Parents' highest education level and child's race-ethnicity | 1974 | 1979 | 1984 | 1989 | 1994 | 1999 |
|---|---|---|---|---|---|---|
| | | | White | | | |
| Mother's highest education level | — | — | — | — | — | — |
| Less than high school diploma | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 |
| High school diploma or GED | 0.5 | 0.5 | 0.6 | 0.7 | 0.6 | 0.6 |
| Some college | 0.3 | 0.4 | 0.5 | 0.5 | 0.6 | 0.6 |
| Bachelor's degree or higher | 0.3 | 0.3 | 0.4 | 0.5 | 0.5 | 0.6 |
| Father's highest education level | — | — | — | — | — | — |
| Less than high school diploma | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 |
| High school diploma or GED | 0.5 | 0.5 | 0.6 | 0.7 | 0.7 | 0.6 |
| Some college | 0.4 | 0.4 | 0.5 | 0.6 | 0.6 | 0.6 |
| Bachelor's degree or higher | 0.4 | 0.5 | 0.6 | 0.6 | 0.7 | 0.7 |
| | | | Black | | | |
| Mother's highest education level | — | — | — | — | — | — |
| Less than high school diploma | 1.5 | 1.5 | 1.6 | 1.5 | 1.5 | 1.3 |
| High school diploma or GED | 1.4 | 1.5 | 1.6 | 1.7 | 1.8 | 1.6 |
| Some college | 0.8 | 1.0 | 1.2 | 1.4 | 1.7 | 1.5 |
| Bachelor's degree or higher | 0.6 | 0.7 | 0.8 | 1.0 | 1.1 | 1.1 |
| Father's highest education level | — | — | — | — | — | — |
| Less than high school diploma | 1.9 | 2.1 | 2.2 | 2.2 | 2.1 | 1.7 |
| High school diploma or GED | 1.7 | 2.0 | 2.2 | 2.5 | 2.6 | 1.9 |
| Some college | 1.0 | 1.4 | 1.7 | 2.0 | 2.3 | 1.8 |
| Bachelor's degree or higher | 0.8 | 1.1 | 1.5 | 1.7 | 2.0 | 1.5 |
| | | | Hispanic | | | |
| Mother's highest education level | — | — | — | — | — | — |
| Less than high school diploma | 1.8 | 1.9 | 1.9 | 2.2 | 2.5 | 1.7 |
| High school diploma or GED | 1.7 | 1.7 | 1.7 | 2.0 | 2.2 | 1.5 |
| Some college | 0.9 | 1.0 | 1.0 | 1.4 | 1.8 | 1.3 |
| Bachelor's degree or higher | 0.7 | 0.8 | 0.7 | 1.0 | 1.2 | 0.9 |
| Father's highest education level | — | — | — | — | — | — |
| Less than high school diploma | 2.0 | 2.1 | 2.2 | 2.6 | 2.9 | 1.9 |
| High school diploma or GED | 1.8 | 1.8 | 1.9 | 2.3 | 2.5 | 1.4 |
| Some college | 1.1 | 1.2 | 1.3 | 1.8 | 2.2 | 1.2 |
| Bachelor's degree or higher | 1.1 | 1.2 | 1.2 | 1.4 | 1.6 | 1.0 |

— Not available.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys, various years.

# Language Spoken at Home by Hispanic Students

**Table S6-1** Standard errors for the number and percentage distribution of students enrolled in grades K–12, by race-ethnicity: 1999

| | Total | Students in grades K–12 | | | |
|---|---|---|---|---|---|
| | | White | Black | Hispanic | Other |
| Number | 17.7 | 10.7 | 2.7 | 3.2 | 0.9 |
| Percent | — | 0.3 | 0.2 | 0.2 | 0.2 |

— Not applicable

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Parent Interview Component).

**Table S6-2** Standard errors for the percentage distribution of Hispanic students in grades K–12, by language spoken at home and grade: 1999

| Grade enrolled | Total | Spoke mostly English at home | Spoke English and Spanish equally at home | Spoke mostly Spanish at home | Spoke English and other language equally/ spoke other language |
|---|---|---|---|---|---|
| **Total** | — | 1.1 | 0.9 | 1.0 | 0.2 |
| K–5 | — | 1.3 | 1.2 | 1.3 | 0.3 |
| 6–8 | — | 2.5 | 2.1 | 1.7 | 0.4 |
| 9–12 | — | 1.9 | 1.5 | 1.8 | 0.1 |

— Not applicable

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Parent Interview Component).

**Table S6-3** Standard errors for the percentage distribution of Hispanic students in grades K–12, by language spoken at home, grade, and mother's birth place: 1999

| Grade enrolled | Total | Spoke mostly English at home | Spoke English and Spanish equally at home | Spoke mostly Spanish at home | Spoke English and other language equally/ spoke other language |
|---|---|---|---|---|---|
| | | | Mother was born in the United States | | |
| **Total** | — | 1.3 | 0.9 | 0.8 | 0.2 |
| K–5 | — | 1.6 | 0.9 | 1.3 | 0.2 |
| 6–8 | — | 2.9 | 2.7 | 1.3 | 0.8 |
| 9–12 | — | 1.7 | 1.1 | 1.4 | 0.3 |
| | | | Mother was not born in the United States | | |
| **Total** | — | 1.5 | 1.6 | 1.6 | 0.3 |
| K–5 | — | 1.8 | 2.1 | 2.0 | 0.5 |
| 6–8 | — | 3.1 | 3.4 | 3.3 | 0.6 |
| 9–12 | — | 3.1 | 2.7 | 3.2 | 0.1 |

— Not applicable

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Parent Interview Component).

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# Language Spoken at Home by Hispanic Students

Table S6-4 Standard errors for the percentage distribution of Hispanic students in grades K–12, by language spoken at home and various demographic characteristics: 1999

| Demographic characteristic | Total | Language spoken at home by student: Mostly English | Language spoken at home by student: English and Spanish equally | Language spoken at home by student: Mostly Spanish |
|---|---|---|---|---|
| **Total** | — | — | — | — |
| Language spoken most at home by mother | | | | |
| English | 1.3 | 1.4 | 1.3 | 1.1 |
| Spanish | 1.3 | 1.4 | 1.3 | 1.1 |
| English and other language equally/other language | 0.2 | 0.2 | — | 0.3 |
| Mother's place of birth | | | | |
| United States/territories | 1.2 | 1.5 | 2.4 | 1.5 |
| Other countries | 1.2 | 1.5 | 2.4 | 1.5 |
| Mother's first language | | | | |
| English | 1.3 | 1.7 | 1.0 | 1.1 |
| Spanish | 1.3 | 1.7 | 1.0 | 1.1 |
| English and other language equally/other language | 0.3 | 0.5 | 0.3 | 0.2 |
| Parents' highest education level | | | | |
| Less than high school diploma | 1.3 | 1.7 | 2.9 | 2.5 |
| High school diploma or GED or higher | 1.3 | 1.7 | 2.9 | 2.5 |
| High school diploma or GED | 1.1 | 1.4 | 2.5 | 1.9 |
| Some college/vocational/technical | 0.9 | 1.5 | 2.4 | 1.6 |
| Bachelor's degree | 0.7 | 1.1 | 1.2 | 1.2 |
| Graduate/professional school | 0.5 | 0.9 | 1.0 | 0.9 |
| Household income | | | | |
| $20,000 or less | 0.9 | 1.5 | 2.9 | 2.4 |
| 10,000 or less | 0.5 | 1.2 | 2.8 | 1.9 |
| 10,001–20,000 | 0.9 | 1.3 | 2.9 | 2.2 |
| $20,001 or more | 0.9 | 1.5 | 2.9 | 2.4 |
| 20,001–30,000 | 1.0 | 1.0 | 2.5 | 2.3 |
| 30,001–50,000 | 0.7 | 1.2 | 1.0 | 0.9 |
| 50,001 or more | 0.7 | 1.3 | 1.2 | 0.7 |

— Not applicable

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Parent Interview Component).

## Graduate/Professional Enrollment and Employment

Table S9-1 Standard errors for the percentage distribution of graduate and first-professional students according to selected enrollment and employment characteristics: Academic year 1995–96

| | M.B.A. | M.A.T, M.Ed., M.A./M.S. in education | M.A./M.S. (except education) | Ph.D. | Ed.D. | M.D. | Law (LL.B. or J.D.) |
|---|---|---|---|---|---|---|---|
| **Total** | — | — | — | — | — | — | — |
| Attendance pattern | | | | | | | |
| Full-time, full-year | 2.5 | 1.6 | 2.0 | 4.5 | 5.3 | 2.2 | 2.2 |
| Part-time, full-year | 3.0 | 2.3 | 2.0 | 4.0 | 6.9 | 0.7 | 2.1 |
| Other | 2.2 | 2.2 | 2.4 | 1.8 | 7.6 | 2.0 | 1.2 |
| Employment status | | | | | | | |
| Worked at all | 3.1 | 2.5 | 2.7 | 4.4 | 2.6 | 4.3 | 3.5 |
| Worked full-time if worked | 4.0 | 2.9 | 2.4 | 5.0 | 6.9 | 3.9 | 2.5 |
| Primary role if working | | | | | | | |
| Student meeting expenses | 3.3 | 3.2 | 4.0 | 4.7 | 7.1 | 9.7 | 3.1 |
| Employee enrolled in school | 3.3 | 3.2 | 4.0 | 4.7 | 7.1 | 9.7 | 3.1 |

— Not applicable

SOURCE: U.S. Department of Education, NCES. National Postsecondary Student Aid Study (NPSAS:1996), Graduate Data Analysis System.

## Participation in Adult Learning

Table S10-1 Standard errors for the percentage of adults ages 18 or older who participated in learning activities in the past 12 months, by educational attainment and age: 1991, 1995, and 1999

| | | | 1999 | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Type of adult learning activity | | | | |
| | | | | | Credential | | | |
| Educational attainment and age | 1991 Total | 1995 Total | Total | Basic skills | Full-time | Part-time | Work-related | Personal |
| **Total** | **0.7** | **0.5** | **0.8** | **0.3** | **0.3** | **0.4** | **0.7** | **0.7** |
| Educational attainment | | | | | | | | |
| Grade 8 or less | 1.5 | 1.1 | 2.4 | 1.8 | — | 0.3 | 0.5 | 1.9 |
| Grades 9-12 | 2.3 | 1.4 | 2.1 | 1.3 | 0.4 | 0.9 | 0.9 | 1.5 |
| High school diploma or GED | 1.1 | 0.8 | 1.7 | 0.7 | 0.8 | 0.7 | 1.5 | 1.4 |
| Some college/ technical/ vocational school | 1.9 | 0.7 | 1.4 | 0.3 | 0.9 | 0.9 | 1.3 | 1.3 |
| Bachelor's degree or higher | 2.0 | 1.0 | 1.5 | — | 0.6 | 0.8 | 1.5 | 1.4 |
| Age | | | | | | | | |
| 18–24 | 2.4 | 1.1 | 2.4 | 1.9 | 2.3 | 1.5 | 2.3 | 2.1 |
| 25–34 | 2.0 | 0.9 | 2.1 | 0.5 | 0.9 | 1.1 | 1.9 | 1.7 |
| 35–44 | 2.2 | 0.9 | 1.9 | 0.3 | 0.4 | 1.0 | 1.5 | 1.5 |
| 45–54 | 2.2 | 1.2 | 2.0 | 0.2 | 0.4 | 1.0 | 1.6 | 1.6 |
| 55–64 | 2.1 | 1.1 | 2.2 | 0.2 | 0.1 | 0.8 | 1.7 | 1.8 |
| 65 and older | 1.3 | 1.0 | 1.3 | 0.6 | 0.1 | 0.4 | 0.6 | 1.1 |

— Not applicable

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1991, 1995 and 1999 (Adult Education Component).

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## Participation in Adult Learning

Table S10-2 Standard errors for the percentage of adults age 18 or older who participated in various learning activities with different providers, by type of activity: 1999

| | Type of provider for various adult learning activities | | | | | | |
|---|---|---|---|---|---|---|---|
| Type of activity | Elementary/ secondary | Post-secondary | Trade organization | Private | Business | Government | Other |
| Credential | 0.4 | 1.6 | 1.0 | 0.5 | 0.7 | 0.8 | 0.6 |
| Full-time | 0.4 | 1.8 | 1.2 | 0.6 | 0.4 | 1.2 | 0.6 |
| Part-time | 0.5 | 2.3 | 1.5 | 0.8 | 1.2 | 1.0 | 1.0 |
| Work-related | 1.0 | 1.1 | 1.0 | 0.6 | 1.7 | 1.1 | 0.6 |
| Personal | 0.7 | 1.1 | 0.9 | 1.3 | 1.3 | 0.8 | 0.7 |

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Adult Education Component).

## Kindergartners' Skills and Proficiency in Reading and Mathematics

Table S11-1 Standard errors for the percentage of first-time kindergartners achieving each reading and mathematics proficiency level, by child and family characteristics: Fall 1998

| | Reading proficiencies | | | Mathematics proficiencies | | |
|---|---|---|---|---|---|---|
| Characteristic | Letter recognition | Beginning sounds | Ending sounds | Number and shape | Relative size | Ordinal sequence |
| **Total** | **0.8** | **0.9** | **0.7** | **0.3** | **0.7** | **0.7** |
| Sex | | | | | | |
| Male | 0.8 | 0.9 | 0.7 | 0.5 | 0.9 | 0.8 |
| Female | 0.9 | 1.1 | 0.8 | 0.3 | 0.9 | 0.7 |
| Mother's highest education level | | | | | | |
| Less than high school | 1.5 | 0.9 | 0.6 | 1.0 | 1.2 | 0.6 |
| High school diploma or equivalent | 1.1 | 1.1 | 0.8 | 0.5 | 0.9 | 0.7 |
| Some college, including vocational/technical | 1.0 | 1.1 | 0.9 | 0.4 | 0.9 | 0.9 |
| Bachelor's degree or higher | 0.8 | 1.2 | 1.1 | 0.2 | 0.9 | 1.0 |
| Race-ethnicity | | | | | | |
| White | 0.9 | 1.1 | 0.8 | 0.2 | 0.8 | 0.8 |
| Black | 1.6 | 1.7 | 1.2 | 0.8 | 1.5 | 1.0 |
| Asian/Pacific Islander | 1.7 | 1.5 | 2.2 | 0.7 | 1.5 | 0.9 |
| Hispanic | 1.7 | 2.4 | 1.2 | 0.7 | 2.4 | 2.1 |

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

# Kindergartners' Overall Reading and Mathematics Performance

Table S12-1 **Standard errors for the mean reading *t*-scores of first-time kindergartners, and percentage distribution of quartile scores, by child and family characteristics: Fall 1998**

| Characteristic | Mean t-score | Quartile score<br>0–25 percent | 26–50 percent | 51–75 percent | 76–100 percent |
|---|---|---|---|---|---|
| **Total** | **0.2** | **0.8** | **0.6** | **0.5** | **0.8** |
| Sex | | | | | |
| Male | 0.2 | 0.9 | 0.7 | 0.6 | 0.8 |
| Female | 0.2 | 0.9 | 0.8 | 0.6 | 1.0 |
| Mother's highest education level | | | | | |
| Less than high school | 0.3 | 1.4 | 1.1 | 1.2 | 0.7 |
| High school diploma or equivalent | 0.2 | 1.1 | 0.9 | 0.9 | 0.9 |
| Some college, including vocational/technical | 0.5 | 0.9 | 0.8 | 0.6 | 1.0 |
| Bachelor's degree or higher | 0.2 | 0.6 | 0.8 | 0.3 | 1.2 |
| Child's race-ethnicity | | | | | |
| White | 0.2 | 0.7 | 0.7 | 0.6 | 1.0 |
| Black | 0.4 | 1.6 | 1.5 | 1.0 | 1.4 |
| Asian | 0.6 | 1.5 | 2.0 | 1.9 | 2.4 |
| Hispanic | 0.5 | 2.1 | 1.2 | 1.1 | 1.5 |

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

Table S12-2 **Standard errors for the mean mathematics *t*-scores of first-time kindergartners, and percentage distribution of quartile scores, by child and family characteristics: Fall 1998**

| Characteristic | Mean t-score | Quartile score<br>0–25 percent | 26–50 percent | 51–75 percent | 76–100 percent |
|---|---|---|---|---|---|
| **Total** | **0.2** | **0.7** | **0.5** | **0.5** | **0.7** |
| Sex | | | | | |
| Male | 0.2 | 0.9 | 0.6 | 0.5 | 0.9 |
| Female | 0.2 | 0.8 | 0.6 | 0.7 | 0.8 |
| Mother's highest education level | | | | | |
| Less than high school | 0.3 | 1.8 | 1.3 | 1.0 | 0.7 |
| High school diploma or equivalent | 0.2 | 1.1 | 0.8 | 0.9 | 0.7 |
| Some college, including vocational/technical | 0.5 | 0.7 | 0.7 | 0.7 | 0.9 |
| Bachelor's degree or higher | 0.2 | 0.6 | 0.8 | 0.8 | 1.2 |
| Child's race-ethnicity | | | | | |
| White | 0.2 | 0.7 | 0.6 | 0.6 | 0.9 |
| Black | 0.4 | 1.5 | 1.0 | 1.2 | 1.1 |
| Asian | 0.6 | 1.7 | 1.6 | 1.8 | 0.9 |
| Hispanic | 0.3 | 1.8 | 1.3 | 1.2 | 2.3 |

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study, "Kindergarten Class of 1998–99," Fall 1998.

# Reading Performance of Students in Grades 4, 8, and 12

Table S13-1 Standard errors for the average reading proficiency (scale score) by grade and selected student characteristics: 1992, 1994, and 1998

| Student characteristic | Grade 4 | | | Grade 8 | | | Grade 12 | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1992 | 1994 | 1998 | 1992 | 1994 | 1998 | 1992 | 1994 | 1998 |
| **Total** | **0.9** | **1.0** | **0.8** | **0.9** | **0.8** | **0.8** | **0.6** | **0.7** | **0.7** |
| Sex | | | | | | | | | |
| Male | 1.2 | 1.3 | 1.1 | 1.1 | 1.0 | 0.9 | 0.7 | 0.8 | 1.0 |
| Female | 1.0 | 1.1 | 0.7 | 1.0 | 1.0 | 0.9 | 0.7 | 0.8 | 0.7 |
| Race-ethnicity | | | | | | | | | |
| White | 1.2 | 1.3 | 0.8 | 1.2 | 1.0 | 0.9 | 0.6 | 0.6 | 0.7 |
| Black | 1.6 | 1.7 | 1.7 | 1.6 | 1.7 | 1.5 | 1.4 | 1.6 | 1.7 |
| Hispanic | 2.1 | 2.6 | 1.8 | 1.4 | 1.4 | 2.1 | 2.3 | 1.5 | 1.5 |
| Asian/Pacific Islander | 2.1 | 2.6 | 1.8 | 3.0 | 3.5 | 3.7 | 3.2 | 1.9 | 3.3 |
| American Indian/Alaskan Native | 4.6 | 3.4 | 3.1 | 3.7 | 4.2 | 4.7 | — | 5.3 | 5.4 |

— Not available

SOURCE: U.S. Department of Education, NCES. *NAEP 1998 Reading, A Report Card for the Nation and the States* (NCES 1999–500), 1999.

Table S13-2 Standard errors for the percentage of students scoring at or above each achievement level in reading, by grade: 1992, 1994, and 1998

| Achievement level | Grade 4 | | | Grade 8 | | | Grade 12 | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1992 | 1994 | 1998 | 1992 | 1994 | 1998 | 1992 | 1994 | 1998 |
| Below basic | 1.1 | 1.0 | 0.9 | 1.0 | 0.9 | 0.9 | 0.6 | 0.7 | 0.9 |
| At or above basic | 1.1 | 1.0 | 0.9 | 1.0 | 0.9 | 0.9 | 0.6 | 0.7 | 0.9 |
| At or above proficient | 1.2 | 1.1 | 0.9 | 1.1 | 0.9 | 0.9 | 0.8 | 1.0 | 0.9 |
| At or above advanced | 0.6 | 0.7 | 0.5 | 0.3 | 0.3 | 0.4 | 0.3 | 0.5 | 0.4 |

SOURCE: U.S. Department of Education, NCES. *NAEP 1998 Reading, A Report Card for the Nation and the States* (NCES 1999–500), 1999.

# Writing Performance of Students in Grades 4, 8, and 12

Table S14-1 Standard errors for the percentage of students scoring within each of the NAEP writing assessment achievement levels, by grade and selected student characteristics: 1998

| Student characteristic | Achievement level | | | |
|---|---|---|---|---|
| | Below basic | Basic | Proficient | Advanced |
| **Grade 4** | **0.4** | **0.6** | **0.7** | **0.2** |
| Sex | | | | |
| Male | 0.6 | 0.7 | 0.8 | 0.2 |
| Female | 0.5 | 0.8 | 0.9 | 0.3 |
| Race-ethnicity | | | | |
| White | 0.4 | 0.8 | 1.0 | 0.2 |
| Black | 1.1 | 1.3 | 0.9 | 0.1 |
| Hispanic | 1.5 | 1.2 | 1.0 | 0.1 |
| Asian/Pacific Islander | 1.5 | 2.2 | 3.3 | 1.6 |
| American Indian/Alaskan Native | 2.3 | 2.5 | 1.7 | 0.4 |
| **Grade 8** | **0.5** | **0.5** | **0.7** | **0.1** |
| Sex | | | | |
| Male | 0.8 | 0.7 | 0.8 | 0.1 |
| Female | 0.3 | 0.8 | 0.8 | 0.2 |
| Race-ethnicity | | | | |
| White | 0.5 | 0.8 | 0.9 | 0.1 |
| Black | 1.4 | 1.3 | 0.7 | — |
| Hispanic | 1.3 | 1.0 | 0.9 | 0.1 |
| Asian/Pacific Islander | 2.3 | 2.3 | 3.2 | 1.1 |
| American Indian/Alaskan Native | 4.5 | 4.8 | 2.6 | — |
| **Grade 12** | **0.7** | **0.7** | **0.7** | **0.1** |
| Sex | | | | |
| Male | 0.9 | 1.0 | 0.7 | 0.1 |
| Female | 0.6 | 0.7 | 0.8 | 0.2 |
| Race-ethnicity | | | | |
| White | 0.8 | 0.9 | 0.9 | 0.2 |
| Black | 1.7 | 1.3 | 1.0 | — |
| Hispanic | 1.5 | 1.7 | 1.0 | 0.1 |
| Asian/Pacific Islander | 2.9 | 2.4 | 3.3 | 0.6 |
| American Indian/Alaskan Native | 3.9 | 4.3 | 4.3 | — |

— Not available

SOURCE: U.S. Department of Education, NCES. *NAEP 1998 Writing: A Report Card for the Nation and the States* (NCES 1999–462), 1999.

# Writing Performance of Students in Grades 4, 8, and 12

**Table S14-2** **Standard errors for the percentage and average writing scale scores of students who reported the occurrence of various school and home factors, by grade and frequency of reports: 1998**

| | Percentage of students | | | Average scale score | | |
|---|---|---|---|---|---|---|
| **Frequency** | **Grade 4** | **Grade 8** | **Grade 12** | **Grade 4** | **Grade 8** | **Grade 12** |
| Teachers talk to students about what they are writing | | | | | | |
| Always | 0.5 | 0.7 | 0.4 | 1.1 | 0.6 | 0.7 |
| Sometimes | 0.5 | 0.5 | 0.4 | 0.7 | 0.8 | 0.8 |
| Never | 0.4 | 0.4 | 0.2 | 1.1 | 1.4 | 1.5 |
| Teachers ask students to write more than one draft of a paper | | | | | | |
| Always | 0.5 | 0.9 | 0.8 | 1.1 | 0.7 | 0.7 |
| Sometimes | 0.6 | 0.6 | 0.5 | 0.7 | 0.8 | 0.9 |
| Never | 0.5 | 0.5 | 0.4 | 0.9 | 1.5 | 1.4 |
| Students discuss their studies with someone at home | | | | | | |
| At least once a week | 0.4 | 0.6 | 0.5 | 0.7 | 0.6 | 0.7 |
| Once/twice a month | 0.2 | 0.3 | 0.3 | 1.3 | 1.2 | 1.3 |
| Never/hardly ever | 0.4 | 0.5 | 0.4 | 0.8 | 0.8 | 1.0 |

SOURCE: U.S. Department of Education, NCES. *NAEP 1998 Writing: A Report Card for the Nation and the States* (NCES 1999–462), 1999.

# Mathematics Performance of Students in Grades 4, 8, and 12

**Table S15-1** **Standard errors for the percentage of students scoring at or above each achievement level in mathematics, by grade: 1990, 1992, and 1996**

| **Achievement** | **Grade 4** | | | **Grade 8** | | | **Grade 12** | | |
|---|---|---|---|---|---|---|---|---|---|
| **level** | **1990** | **1992** | **1996** | **1990** | **1992** | **1996** | **1990** | **1992** | **1996** |
| Below basic | 1.4 | 1.0 | 1.2 | 1.4 | 1.1 | 1.1 | 1.6 | 1.1 | 1.3 |
| At or above basic | 1.4 | 1.0 | 1.2 | 1.4 | 1.1 | 1.1 | 1.6 | 1.1 | 1.3 |
| At or above proficient | 1.2 | 1.0 | 0.9 | 1.1 | 1.0 | 1.1 | 0.9 | 0.8 | 1.1 |
| At or above advanced | 0.4 | 0.3 | 0.3 | 0.3 | 0.4 | 0.5 | 0.3 | 0.3 | 0.3 |

SOURCE: U.S. Department of Education, NCES. *NAEP 1996 Mathematics Report Card for the Nation and the States* (NCES 97–488), 1997.

# Mathematics Performance of Students in Grades 4, 8, and 12

Table S15-2 Standard errors for the average mathematics performance (scale score), by grade and selected student characteristics: 1990, 1992, and 1996

| Student characteristic | Grade 4 | | | Grade 8 | | | Grade 12 | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1990 | 1992 | 1996 | 1990 | 1992 | 1996 | 1990 | 1992 | 1996 |
| **Total** | **0.9** | **0.7** | **0.9** | **1.3** | **0.9** | **1.1** | **1.1** | **0.9** | **1.0** |
| Sex | | | | | | | | | |
| Male | 1.2 | 0.8 | 1.1 | 1.6 | 1.1 | 1.4 | 1.4 | 1.1 | 1.1 |
| Female | 1.1 | 1.0 | 1.0 | 1.3 | 1.0 | 1.1 | 1.3 | 1.0 | 1.1 |
| Race-ethnicity | | | | | | | | | |
| White | 1.1 | 0.9 | 0.9 | 1.4 | 1.0 | 1.2 | 1.2 | 0.9 | 1.0 |
| Black | 1.8 | 1.3 | 2.3 | 2.7 | 1.3 | 2.0 | 1.9 | 1.7 | 2.2 |
| Hispanic | 2.0 | 1.4 | 2.1 | 2.8 | 1.2 | 2.0 | 2.8 | 1.7 | 1.8 |
| Asian/Pacific Islander | 3.5 | 2.3 | 4.1 | 4.8 | 5.4 | 3.9 | 5.2 | 3.5 | 4.8 |
| American Indian/Alaskan Native | 3.9 | 3.1 | 2.3 | 9.4 | 2.8 | 3.0 | — | — | 8.9 |

— Not available.

SOURCE: U.S. Department of Education, NCES. *NAEP 1996 Mathematics Report Card for the Nation and the States* (NCES 1997–488), 1997.

# High Performance in Mathematics and Science

Table S16-1 Standard errors for the percentage of 17-year-old students scoring at or above 300 on the NAEP mathematics and science assessments, by sex: 1977–96

| Sex | 1977 | 1978 | 1982 | 1986 | 1990 | 1992 | 1994 | 1996 |
|---|---|---|---|---|---|---|---|---|
| | | | | Mathematics | | | | |
| **Total** | — | 1.1 | 1.3 | 1.4 | 1.4 | 1.3 | 1.4 | 1.7 |
| Male | — | 1.2 | 1.5 | 1.8 | 1.4 | 1.8 | 2.1 | 1.8 |
| Female | — | 1.3 | 1.4 | 1.7 | 1.8 | 1.6 | 1.4 | 2.2 |
| | | | | Science | | | | |
| **Total** | 0.9 | — | 0.9 | 1.4 | 1.3 | 1.5 | 1.3 | 1.3 |
| Male | 1.1 | — | 1.2 | 2.1 | 1.6 | 2.0 | 1.8 | 1.5 |
| Female | 1.0 | — | 1.2 | 1.5 | 1.7 | 1.7 | 1.8 | 1.7 |

— Not available.

SOURCE: U.S. Department of Education, NCES. National Assessment of Educational Progress, *NAEP 1996 Trends in Academic Progress* (NCES 2000–499), 2000 (forthcoming).

# Trends in the Achievement Gap in Reading Between White and Black Students

Table S17-1 Standard errors for the average reading achievement scale scores, by age, race-ethnicity, and difference: 1971–96

| Race-ethnicity | 1971 | 1975 | 1980 | 1984 | 1988 | 1990 | 1992 | 1994 | 1996 |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Age 9 | | | | |
| White | 0.9 | 0.7 | 0.8 | 0.9 | 1.4 | 1.3 | 1.0 | 1.3 | 1.2 |
| Black | 1.7 | 1.2 | 1.8 | 1.4 | 2.4 | 2.9 | 2.2 | 2.3 | 2.7 |
| Difference | 1.9 | 1.4 | 1.9 | 1.3 | 2.8 | 3.2 | 2.4 | 2.6 | 2.9 |
| | | | | | Age 13 | | | | |
| White | 0.7 | 0.7 | 0.7 | 0.6 | 1.1 | 0.9 | 1.2 | 1.1 | 1.0 |
| Black | 1.2 | 1.2 | 1.5 | 1.2 | 2.4 | 2.2 | 2.3 | 2.4 | 2.6 |
| Difference | 1.4 | 1.4 | 1.6 | 1.1 | 2.6 | 2.4 | 2.7 | 2.7 | 2.8 |
| | | | | | Age 17 | | | | |
| White | 1.0 | 0.6 | 0.9 | 0.9 | 1.2 | 1.2 | 1.4 | 1.5 | 1.2 |
| Black | 1.7 | 2.0 | 1.8 | 1.2 | 2.4 | 2.3 | 2.1 | 3.9 | 2.7 |
| Difference | 2.0 | 2.1 | 2.0 | 1.3 | 2.7 | 2.6 | 2.5 | 4.2 | 3.0 |

SOURCE: U.S. Department of Education, NCES. *NAEP 1996 Trends in Academic Progress*, (NCES 2000–499), 2000 (forthcoming).

# International Comparisons of Student Performance in Mathematics

**Table S18-1** **Standard errors for the average mathematics performance (scale score) of students in grades 4, 8, and in their final year of secondary school, by sex and country: 1995**

| | Grade 4 | | | Grade 8 | | | Final year of secondary school | | |
|---|---|---|---|---|---|---|---|---|---|
| **Country** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** |
| **International average** | **0.7** | **0.8** | **0.8** | **0.6** | **0.8** | **0.7** | **1.2** | **1.5** | **1.6** |
| Australia | 3.1 | 3.5 | 3.7 | 4.0 | 5.1 | 4.6 | 9.3 | 10.3 | 9.3 |
| Austria | 3.1 | 3.6 | 3.6 | 3.0 | 3.2 | 4.5 | 5.3 | 7.2 | 5.5 |
| Belgium (Flemish) | — | — | — | 5.7 | 8.8 | 7.4 | — | — | — |
| Belgium (French) | — | — | — | 3.4 | 4.7 | 3.7 | — | — | — |
| Bulgaria | — | — | — | 6.3 | — | — | — | — | — |
| Canada | 3.3 | 3.4 | 3.9 | 2.4 | 3.2 | 2.7 | 2.8 | 3.8 | 3.5 |
| Colombia | — | — | — | 3.4 | 6.9 | 3.6 | — | — | — |
| Cyprus | 3.1 | 3.5 | 3.3 | 1.9 | 2.8 | 2.5 | 2.5 | 4.9 | 3.7 |
| Czech Republic | 3.3 | 3.4 | 3.6 | 4.9 | 4.5 | 6.3 | 12.3 | 11.3 | 16.8 |
| Denmark | — | — | — | 2.8 | 3.2 | 3.4 | 3.3 | 4.0 | 4.0 |
| England | 3.2 | 3.4 | 4.4 | 2.6 | 5.1 | 3.5 | — | — | — |
| France | — | — | — | 2.9 | 3.1 | 3.8 | 5.1 | 5.6 | 5.3 |
| Germany | — | — | — | 4.5 | 5.1 | 5.0 | 5.9 | 8.8 | 8.8 |
| Greece | 4.4 | 5.0 | 4.5 | 3.1 | 3.7 | 3.1 | — | — | — |
| Hong Kong | 4.3 | 4.7 | 4.2 | 6.5 | 7.7 | 7.7 | — | — | — |
| Hungary | 3.7 | 4.2 | 3.9 | 3.2 | 3.6 | 3.6 | 3.2 | 4.9 | 4.8 |
| Iceland | 2.7 | 3.3 | 3.0 | 4.5 | 5.5 | 5.6 | 2.0 | 3.4 | 2.2 |
| Iran, Islamic Republic | 4.0 | 6.0 | 5.0 | 2.2 | 2.9 | 3.3 | — | — | — |
| Ireland | 3.4 | 3.9 | 4.3 | 5.1 | 7.2 | 6.0 | — | — | — |
| Israel | 3.5 | 4.4 | 4.1 | 6.2 | 6.6 | 6.9 | — | — | — |
| Italy | — | — | — | — | — | — | 5.5 | 7.4 | 6.0 |
| Japan | 2.1 | 2.5 | 2.2 | 1.9 | 2.6 | 2.1 | — | — | — |
| Korea | 2.1 | 2.5 | 2.6 | 2.4 | 3.2 | 3.4 | — | — | — |
| Kuwait | 2.8 | — | — | 2.5 | — | — | — | — | — |
| Latvia (LSS) | 4.8 | 5.5 | 5.2 | 3.1 | 3.8 | 3.5 | — | — | — |
| Lithuania | — | — | — | 3.5 | 4.0 | 4.1 | 6.1 | 7.3 | 7.7 |
| Netherlands | 3.4 | 3.8 | 3.4 | 6.7 | 7.8 | 6.4 | 4.7 | 5.6 | 5.9 |
| New Zealand | 4.3 | 3.7 | 4.3 | 4.5 | 5.9 | 5.3 | 4.5 | 4.9 | 6.2 |
| Norway | 3.0 | 3.5 | 3.6 | 2.2 | 2.8 | 2.7 | 4.1 | 5.3 | 4.8 |
| Portugal | 3.5 | 3.8 | 3.7 | 2.5 | 2.8 | 2.7 | — | — | — |
| Romania | — | — | — | 4.0 | 4.8 | 4.0 | — | — | — |
| Russian Federation | — | — | — | 5.3 | 6.3 | 5.0 | 6.2 | 6.5 | 6.6 |
| Scotland | 3.9 | 4.3 | 3.8 | 5.5 | 6.6 | 5.2 | — | — | — |
| Singapore | 5.3 | 5.5 | 6.4 | 4.9 | 6.3 | 5.4 | — | — | — |
| Slovak Republic | — | — | — | 3.3 | 3.7 | 3.6 | — | — | — |
| Slovenia | 3.2 | 3.4 | 4.0 | 3.1 | 3.8 | 3.3 | 8.3 | 12.7 | 8.0 |
| South Africa | — | — | — | 4.4 | 6.3 | 4.1 | 8.3 | 9.3 | 10.8 |
| Spain | — | — | — | 2.0 | 2.5 | 2.6 | — | — | — |
| Sweden | — | — | — | 3.0 | 3.6 | 3.1 | 4.3 | 5.9 | 3.9 |
| Switzerland | — | — | — | 2.8 | 3.5 | 3.1 | 5.8 | 6.4 | 7.4 |
| Thailand | 4.7 | 5.8 | 4.2 | 5.7 | 5.6 | 7.0 | — | — | — |
| United States | 3.0 | 3.1 | 3.3 | 4.6 | 5.2 | 4.5 | 3.2 | 4.1 | 3.6 |

— Not available

SOURCE: U.S. Department of Education, NCES. *Pursuing Excellence: A Study of U.S. Fourth-Grade Mathematics and Science Achievement in International Context* (NCES 97–255), 1997; U.S. Department of Education, NCES. *Pursuing Excellence: A Study of U.S. Eighth-Grade Mathematics and Science Teaching, Learning, Curriculum, and Achievement in International Context* (NCES 97–178), 1996; U.S. Department of Education, NCES. *Pursuing Excellence: A Study of U.S. Twelfth-Grade Mathematics and Science Achievement in International Context* (NCES 98–049), 1998.

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# Physics and Advanced Mathematics Performance

**Table S19-1** **Standard errors for the average physics and advanced mathematics scale scores in the final year of secondary school, by sex and country: 1995**

| | Physics | | | Advanced mathematics | | |
|---|---|---|---|---|---|---|
| Country | Total | Male | Female | Total | Male | Female |
| **International average** | **2.2** | **2.4** | **2.6** | **1.7** | **2.0** | **2.2** |
| Australia | 6.2 | 6.7 | 8.4 | 11.6 | 11.4 | 15.1 |
| Austria | 6.4 | 8.1 | 7.4 | 7.2 | 7.3 | 8.6 |
| Canada | 3.3 | 6.0 | 6.3 | 4.3 | 6.4 | 4.4 |
| Cyprus | 5.8 | 8.9 | 7.1 | 4.3 | 4.4 | 6.4 |
| Czech Republic | 6.2 | 8.8 | 3.9 | 11.2 | 13.0 | 8.9 |
| Denmark | 4.2 | 5.2 | 8.1 | 3.4 | 4.4 | 4.6 |
| France | 3.8 | 4.2 | 5.6 | 3.9 | 5.1 | 5.1 |
| Germany | 11.9 | 14.3 | 9.1 | 5.6 | 6.5 | 6.6 |
| Greece | 5.6 | 6.1 | 8.1 | 6.0 | 6.6 | 10.2 |
| Italy | — | — | — | 9.6 | 10.6 | 14.1 |
| Latvia | 21.5 | 19.0 | 22.6 | — | — | — |
| Lithuania | — | — | — | 2.6 | 3.7 | 5.6 |
| Norway | 6.5 | 6.3 | 9.3 | — | — | — |
| Russian Federation | 11.6 | 9.9 | 15.3 | 9.2 | 9.7 | 10.2 |
| Slovenia | 15.5 | 16.3 | 18.7 | 9.2 | 11.5 | 11.0 |
| Sweden | 3.9 | 5.1 | 5.3 | 4.4 | 5.9 | 5.2 |
| Switzerland | 3.5 | 5.2 | 3.6 | 5.0 | 5.6 | 5.7 |
| United States | 3.3 | 4.3 | 3.1 | 5.9 | 7.8 | 7.1 |

— Not available.

SOURCE: International Association for the Evaluation of Educational Achievement, TIMSS International Study Center, *Achievement in the Final Year of Secondary School: IEA's Third International Mathematics and Science Study*, 1998.

# Civics Performance of Students

**Table S20-1 Standard errors for the percentage distribution of students according to civics achievement level, by grade and selected student characteristics: 1998**

| Student characteristic | Achievement level | | | |
|---|---|---|---|---|
| | Below Basic | Basic | Proficient | Advanced |
| | | Grade 4 | | |
| **Total** | **1.0** | **0.8** | **0.9** | **0.3** |
| Sex | | | | |
| Male | 1.2 | 1.3 | 1.2 | 0.4 |
| Female | 1.0 | 1.0 | 1.1 | 0.4 |
| Race-ethnicity | | | | |
| White | 1.1 | 1.0 | 1.2 | 0.5 |
| Black | 1.8 | 2.3 | 1.2 | 0.3 |
| Hispanic | 2.2 | 1.9 | 0.9 | — |
| Asian/Pacific Islander | 3.5 | 5.8 | 4.8 | 1.3 |
| American Indian/Alaskan Native | 4.0 | 4.6 | 3.9 | — |
| | | Grade 8 | | |
| **Total** | **0.9** | **0.7** | **0.8** | **0.2** |
| Sex | | | | |
| Male | 1.1 | 1.1 | 1.0 | 0.3 |
| Female | 1.2 | 1.0 | 1.1 | 0.3 |
| Race-ethnicity | | | | |
| White | 1.0 | 1.0 | 1.0 | 0.3 |
| Black | 1.7 | 1.6 | 1.0 | — |
| Hispanic | 2.2 | 2.3 | 0.8 | 0.2 |
| Asian/Pacific Islander | 5.8 | 4.1 | 4.1 | 1.1 |
| American Indian/Alaskan Native | 5.7 | 4.3 | 3.8 | — |
| | | Grade 12 | | |
| **Total** | **0.9** | **0.7** | **0.8** | **0.4** |
| Sex | | | | |
| Male | 1.2 | 1.0 | 1.0 | 0.6 |
| Female | 1.2 | 1.0 | 1.2 | 0.4 |
| Race-ethnicity | | | | |
| White | 1.1 | 0.8 | 1.1 | 0.6 |
| Black | 2.3 | 2.1 | 1.2 | 0.3 |
| Hispanic | 1.9 | 2.3 | 1.3 | 0.4 |
| Asian/Pacific Islander | 3.8 | 4.0 | 4.8 | 2.1 |
| American Indian/Alaskan Native | 8.8 | 8.2 | 4.1 | — |

— Standard error estimate cannot be accurately determined due to small sample size.

SOURCE: U.S. Department of Education, NCES. *NAEP 1998 Civics Report Card for the Nation: Findings from the National Assessment of Educational Progress* (NCES 2000–457), 1999.

# Civic Activities of Students: News Attentiveness

**Table S21-1** **Standard errors for the percentage of students in grades 6–12 who reported reading, watching or listening to, and/or discussing the news with their parents almost daily, by sex, race-ethnicity, and coursetaking: 1998**

| Type of civic activity and coursetaking | Total | Sex | | Race-ethnicity | | | |
|---|---|---|---|---|---|---|---|
| | | Male | Female | White | Black | Hispanic | Other |
| **All students in grades 6–12** | | | | | | | |
| Read national news stories | 0.4 | 0.5 | 0.5 | 0.5 | 0.9 | 0.8 | 1.5 |
| Watch/listen to national news | 0.6 | 0.8 | 0.8 | 0.7 | 1.5 | 1.4 | 2.4 |
| Discuss national news with parents | 0.3 | 0.4 | 0.4 | 0.3 | 0.8 | 0.8 | 1.3 |
| Any of the above | 0.6 | 0.8 | 0.8 | 0.7 | 1.5 | 1.4 | 2.4 |
| **Students who took a course** | | | | | | | |
| Read national news stories | 0.5 | 0.7 | 0.6 | 0.6 | 1.2 | 1.1 | 1.9 |
| Watch/listen to national news | 0.7 | 0.9 | 0.9 | 0.8 | 1.7 | 1.7 | 2.8 |
| Discuss national news with parents | 0.4 | 0.5 | 0.5 | 0.4 | 1.0 | 1.0 | 1.5 |
| Any of the above | 0.7 | 0.9 | 1.0 | 0.8 | 1.7 | 1.7 | 2.9 |
| **Students who did not take a course** | | | | | | | |
| Read national news stories | 0.5 | 0.8 | 0.7 | 0.6 | 1.3 | 1.2 | 2.5 |
| Watch/listen to national news | 1.0 | 1.4 | 1.4 | 1.3 | 2.8 | 2.2 | 4.5 |
| Discuss national news with parents | 0.5 | 0.6 | 0.7 | 0.5 | 1.4 | 1.1 | 2.4 |
| Any of the above | 1.0 | 1.4 | 1.5 | 1.3 | 2.9 | 2.2 | 4.5 |

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Youth Interview Component).

# Voting Participation

**Table S22-1** **Standard errors for the voting rates and ratios of voting rates for the population ages 25–44, by highest level of educational attainment and type of election: Selected years 1964–98**

| Type of election and year | Total | Highest level of educational attainment | | | |
|---|---|---|---|---|---|
| | | 1–3 years of high school | High school diploma or GED | Some college | Bachelor's degree or higher |
| | | | **Voting rates** | | |
| Congressional elections | | | | | |
| 1974 | 0.3 | 0.8 | 0.5 | 0.8 | 0.8 |
| 1990 | 0.3 | 0.8 | 0.5 | 0.7 | 0.6 |
| 1994 | 0.3 | 0.7 | 0.5 | 0.6 | 0.6 |
| 1998 | 0.3 | 0.7 | 0.5 | 0.6 | 0.6 |
| Presidential elections | | | | | |
| 1964 | 0.7 | 1.3 | 0.9 | 1.4 | 1.2 |
| 1976 | 0.3 | 0.9 | 0.5 | 0.8 | 0.6 |
| 1988 | 0.3 | 1.1 | 0.6 | 0.7 | 0.6 |
| 1992 | 0.3 | 0.9 | 0.5 | 0.5 | 0.5 |
| 1996 | 0.3 | 0.9 | 0.5 | 0.6 | 0.6 |
| | | | **Ratio of voting rate to that of high school graduates** | | |
| Congressional elections | | | | | |
| 1974 | — | 0.02 | — | 0.03 | 0.03 |
| 1990 | — | 0.02 | — | 0.03 | 0.03 |
| 1994 | — | 0.02 | — | 0.03 | 0.03 |
| 1998 | — | 0.03 | — | 0.03 | 0.04 |
| Presidential elections | | | | | |
| 1964 | — | 0.02 | — | 0.02 | 0.02 |
| 1976 | — | 0.02 | — | 0.02 | 0.02 |
| 1988 | — | 0.02 | — | 0.02 | 0.02 |
| 1992 | — | 0.02 | — | 0.02 | 0.02 |
| 1996 | — | 0.02 | — | 0.02 | 0.03 |

— Not applicable.

SOURCE: U.S. Department of Commerce, Bureau of the Census. *Current Population Reports*, "Voting and Registration in the Election of November (various years)," series P-20, Nos. 143, 293, 322, 440, 453, 466, PPL-25, P20-504, and P25-1132.

# Voting Participation

**Table S22-2** Standard errors for the percentage of 18- to 24-year-olds who reported voting and being registered to vote, by sex, race-ethnicity, and enrollment status: November 1998

| Enrollment status | Total | Sex | | Race-ethnicity | | |
|---|---|---|---|---|---|---|
| | | Male | Female | White | Black | Hispanic |
| | | | | **Reported voting** | | |
| **Total** | **0.5** | **0.6** | **0.7** | **0.6** | **1.2** | **1.3** |
| Enrolled in high school | 1.4 | 1.8 | 2.3 | 2.0 | 2.6 | 2.8 |
| Enrolled in college | 0.8 | 1.2 | 1.2 | 1.0 | 2.3 | 3.1 |
| Full time | 0.9 | 1.3 | 1.3 | 1.0 | 2.5 | 3.8 |
| Part time | 2.2 | 3.1 | 3.0 | 2.7 | 5.7 | 4.4 |
| Not enrolled in school | 0.6 | 0.8 | 0.8 | 0.7 | 1.5 | 1.5 |
| 18–20 years old | 0.9 | 1.2 | 1.2 | 1.1 | 2.0 | 1.7 |
| 21–24 years old | 0.7 | 1.1 | 1.1 | 0.9 | 2.0 | 2.1 |
| | | | | **Reported being registered to vote** | | |
| **Total** | **0.6** | **0.8** | **0.8** | **0.7** | **1.5** | **1.8** |
| Enrolled in high school | 1.9 | 2.4 | 3.0 | 2.6 | 3.9 | 4.5 |
| Enrolled in college | 1.0 | 1.4 | 1.3 | 1.1 | 2.9 | 3.6 |
| Full time | 1.1 | 1.5 | 1.5 | 1.2 | 3.1 | 4.2 |
| Part time | 2.4 | 3.5 | 3.4 | 2.9 | 6.9 | 6.7 |
| Not enrolled in school | 0.8 | 1.1 | 1.1 | 0.9 | 2.0 | 2.2 |
| 18–20 years old | 1.3 | 1.7 | 1.9 | 1.6 | 3.1 | 3.0 |
| 21–24 years old | 1.0 | 1.4 | 1.3 | 1.1 | 2.5 | 2.9 |

SOURCE: U.S. Department of Commerce, Bureau of the Census. *Current Population Reports*, unpublished tabulations from the *Voting and Registration Supplement*, 1998.

## Annual Earnings of Young Adults

**Table S23-1** **Standard errors for the median annual earnings (in constant 1999 dollars) of all wage and salary workers ages 25–34, by sex and educational attainment: 1970–98**

| | Male | | | | Female | | | |
|---|---|---|---|---|---|---|---|---|
| Year | Grades 9–11 | High school | Some college | Bachelor's or higher | Grades 9–11 | High school | Some college | Bachelor's or higher |
| 1970 | $705 | $360 | $648 | $751 | $601 | $453 | $1,197 | $951 |
| 1971 | 555 | 410 | 705 | 711 | 633 | 491 | 1,059 | 847 |
| 1972 | 768 | 355 | 651 | 662 | 796 | 489 | 877 | 712 |
| 1973 | 752 | 383 | 625 | 632 | 719 | 382 | 749 | 651 |
| 1974 | 710 | 363 | 509 | 588 | 667 | 375 | 636 | 611 |
| 1975 | 786 | 377 | 542 | 631 | 436 | 397 | 579 | 503 |
| 1976 | 680 | 363 | 591 | 583 | 665 | 380 | 583 | 538 |
| 1977 | 833 | 403 | 620 | 617 | 756 | 369 | 511 | 543 |
| 1978 | 817 | 590 | 658 | 510 | 350 | 314 | 553 | 547 |
| 1979 | 727 | 473 | 485 | 482 | 646 | 344 | 453 | 362 |
| 1980 | 610 | 336 | 455 | 564 | 674 | 309 | 450 | 388 |
| 1981 | 576 | 348 | 451 | 479 | 478 | 286 | 352 | 514 |
| 1982 | 573 | 340 | 506 | 428 | 603 | 309 | 339 | 478 |
| 1983 | 562 | 343 | 553 | 483 | 592 | 304 | 389 | 365 |
| 1984 | 516 | 822 | 549 | 761 | 595 | 268 | 344 | 362 |
| 1985 | 433 | 330 | 416 | 407 | 568 | 245 | 358 | 464 |
| 1986 | 502 | 357 | 475 | 473 | 566 | 229 | 510 | 486 |
| 1987 | 632 | 417 | 433 | 585 | 570 | 233 | 464 | 425 |
| 1988 | 662 | 371 | 457 | 885 | 498 | 233 | 479 | 364 |
| 1989 | 657 | 266 | 507 | 674 | 715 | 233 | 391 | 338 |
| 1990 | 632 | 326 | 585 | 645 | 601 | 213 | 341 | 517 |
| 1991 | 708 | 305 | 585 | 392 | 689 | 234 | 363 | 496 |
| 1992 | 665 | 354 | 509 | 385 | 516 | 329 | 344 | 411 |
| 1993 | 684 | 267 | 452 | 424 | 441 | 360 | 316 | 412 |
| 1994 | 605 | 277 | 528 | 578 | 639 | 340 | 343 | 337 |
| 1995 | 474 | 294 | 542 | 982 | 407 | 421 | 350 | 349 |
| 1996 | 462 | 341 | 331 | 504 | 593 | 346 | 385 | 305 |
| 1997 | 541 | 420 | 340 | 438 | 773 | 327 | 385 | 574 |
| 1998 | 590 | 310 | 660 | 785 | 570 | 352 | 406 | 384 |

SOURCE: U.S. Department of Commerce, Bureau of the Census. March Current Population Surveys.

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# Annual Earnings of Young Adults

Table S23-2 Standard errors for the ratio of median annual earnings of all wage and salary workers ages 25–34 whose highest education level was grades 9–11, some college, or a bachelor's degree or higher, compared with those with a high school diploma or GED, by sex: 1970–98

| | Grades 9–11 | | Some college | | Bachelor's degree or higher | |
|---|---|---|---|---|---|---|
| Year | Male | Female | Male | Female | Male | Female |
| 1970 | 0.02 | 0.04 | 0.02 | 0.09 | 0.02 | 0.09 |
| 1971 | 0.02 | 0.05 | 0.02 | 0.08 | 0.02 | 0.08 |
| 1972 | 0.02 | 0.05 | 0.02 | 0.07 | 0.02 | 0.07 |
| 1973 | 0.02 | 0.05 | 0.02 | 0.06 | 0.02 | 0.06 |
| 1974 | 0.02 | 0.05 | 0.02 | 0.05 | 0.02 | 0.06 |
| 1975 | 0.03 | 0.03 | 0.02 | 0.05 | 0.02 | 0.06 |
| 1976 | 0.02 | 0.04 | 0.02 | 0.05 | 0.02 | 0.05 |
| 1977 | 0.03 | 0.05 | 0.02 | 0.04 | 0.02 | 0.05 |
| 1978 | 0.03 | 0.02 | 0.03 | 0.04 | 0.03 | 0.05 |
| 1979 | 0.02 | 0.04 | 0.02 | 0.04 | 0.02 | 0.04 |
| 1980 | 0.02 | 0.04 | 0.02 | 0.04 | 0.02 | 0.04 |
| 1981 | 0.02 | 0.03 | 0.02 | 0.03 | 0.02 | 0.04 |
| 1982 | 0.02 | 0.04 | 0.02 | 0.03 | 0.02 | 0.05 |
| 1983 | 0.02 | 0.04 | 0.02 | 0.04 | 0.02 | 0.04 |
| 1984 | 0.03 | 0.04 | 0.04 | 0.03 | 0.05 | 0.04 |
| 1985 | 0.02 | 0.04 | 0.02 | 0.03 | 0.02 | 0.04 |
| 1986 | 0.02 | 0.04 | 0.02 | 0.04 | 0.03 | 0.04 |
| 1987 | 0.03 | 0.04 | 0.02 | 0.03 | 0.03 | 0.04 |
| 1988 | 0.03 | 0.03 | 0.02 | 0.04 | 0.04 | 0.03 |
| 1989 | 0.03 | 0.05 | 0.02 | 0.03 | 0.03 | 0.04 |
| 1990 | 0.03 | 0.04 | 0.03 | 0.03 | 0.03 | 0.04 |
| 1991 | 0.03 | 0.05 | 0.03 | 0.03 | 0.02 | 0.04 |
| 1992 | 0.03 | 0.04 | 0.03 | 0.04 | 0.03 | 0.05 |
| 1993 | 0.03 | 0.03 | 0.02 | 0.04 | 0.03 | 0.06 |
| 1994 | 0.03 | 0.04 | 0.03 | 0.03 | 0.03 | 0.05 |
| 1995 | 0.02 | 0.03 | 0.03 | 0.04 | 0.05 | 0.06 |
| 1996 | 0.02 | 0.04 | 0.02 | 0.04 | 0.03 | 0.05 |
| 1997 | 0.02 | 0.05 | 0.02 | 0.04 | 0.03 | 0.05 |
| 1998 | 0.02 | 0.04 | 0.03 | 0.04 | 0.04 | 0.05 |

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys.

## Annual Earnings of Young Adults

**Table S23-3** Standard errors for the ratio of median annual earnings of all male to all female wage and salary workers ages 25–34, by educational attainment: 1970–98

| Year | Grades 9–11 | High school completer | Some college | Bachelor's degree or higher |
|---|---|---|---|---|
| 1970 | 0.25 | 0.08 | 0.15 | 0.06 |
| 1971 | 0.21 | 0.08 | 0.14 | 0.05 |
| 1972 | 0.25 | 0.08 | 0.10 | 0.05 |
| 1973 | 0.21 | 0.07 | 0.08 | 0.04 |
| 1974 | 0.23 | 0.06 | 0.07 | 0.04 |
| 1975 | 0.14 | 0.06 | 0.06 | 0.04 |
| 1976 | 0.20 | 0.05 | 0.07 | 0.04 |
| 1977 | 0.21 | 0.05 | 0.05 | 0.04 |
| 1978 | 0.16 | 0.06 | 0.07 | 0.04 |
| 1979 | 0.14 | 0.05 | 0.05 | 0.03 |
| 1980 | 0.16 | 0.04 | 0.04 | 0.03 |
| 1981 | 0.13 | 0.04 | 0.04 | 0.04 |
| 1982 | 0.13 | 0.04 | 0.04 | 0.03 |
| 1983 | 0.12 | 0.04 | 0.04 | 0.03 |
| 1984 | 0.14 | 0.06 | 0.04 | 0.04 |
| 1985 | 0.11 | 0.03 | 0.04 | 0.03 |
| 1986 | 0.11 | 0.03 | 0.05 | 0.03 |
| 1987 | 0.11 | 0.03 | 0.04 | 0.03 |
| 1988 | 0.14 | 0.03 | 0.04 | 0.03 |
| 1989 | 0.16 | 0.03 | 0.04 | 0.03 |
| 1990 | 0.16 | 0.03 | 0.04 | 0.03 |
| 1991 | 0.14 | 0.03 | 0.04 | 0.03 |
| 1992 | 0.09 | 0.04 | 0.03 | 0.02 |
| 1993 | 0.12 | 0.04 | 0.03 | 0.02 |
| 1994 | 0.14 | 0.04 | 0.04 | 0.02 |
| 1995 | 0.10 | 0.05 | 0.04 | 0.04 |
| 1996 | 0.12 | 0.04 | 0.03 | 0.02 |
| 1997 | 0.15 | 0.04 | 0.03 | 0.03 |
| 1998 | 0.11 | 0.04 | 0.04 | 0.03 |

SOURCE: U.S. Department of Commerce, Bureau of the Census. March Current Population Surveys, 1970–98.

# Educational Plans

**Table S24-1** Standard errors for the percentage distribution of high school seniors according to reported plans for postsecondary education, by sex and program type: 1980, 1990, and 1997

| | 1980 | | | 1990 | | | 1997 | | |
|---|---|---|---|---|---|---|---|---|---|
| Postsecondary plans | Total | Male | Female | Total | Male | Female | Total | Male | Female |
| Attend a technical/vocational school | | | | | | | | | |
| Definitely will | 0.4 | 0.5 | 0.5 | 0.4 | 0.5 | 0.5 | 0.4 | 0.5 | 0.5 |
| Probably will | 0.6 | 0.7 | 0.6 | 0.5 | 0.6 | 0.6 | 0.5 | 0.7 | 0.6 |
| Definitely/probably won't | 0.7 | 0.8 | 0.8 | 0.6 | 0.8 | 0.7 | 0.6 | 0.8 | 0.7 |
| Graduate from a 2-year college program | | | | | | | | | |
| Definitely will | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.7 | 0.6 | 0.6 | 0.7 |
| Probably will | 0.6 | 0.7 | 0.7 | 0.6 | 0.7 | 0.8 | 0.6 | 0.7 | 0.7 |
| Definitely/probably won't | 0.7 | 0.8 | 0.8 | 0.7 | 0.8 | 0.9 | 0.7 | 0.9 | 0.9 |
| Graduate from a 4-year college program | | | | | | | | | |
| Definitely will | 0.7 | 0.8 | 0.8 | 0.8 | 0.9 | 0.9 | 0.8 | 0.9 | 0.9 |
| Probably will | 0.6 | 0.7 | 0.7 | 0.6 | 0.8 | 0.7 | 0.6 | 0.8 | 0.7 |
| Definitely/probably won't | 0.7 | 0.9 | 0.9 | 0.7 | 0.8 | 0.8 | 0.6 | 0.8 | 0.7 |
| Attend graduate or professional school after college | | | | | | | | | |
| Definitely will | 0.5 | 0.6 | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.7 | 0.8 |
| Probably will | 0.6 | 0.8 | 0.7 | 0.7 | 0.8 | 0.8 | 0.7 | 0.9 | 0.9 |
| Definitely/probably won't | 0.7 | 0.8 | 0.8 | 0.7 | 0.9 | 0.9 | 0.8 | 0.9 | 0.9 |

SOURCE: U.S. Department of Education, NCES. *Trends in the Educational Equity for Girls and Women* (NCES 2000–030), 2000, (1980 and 1990 data); University of Michigan, Institute for Social Research, *Monitoring the Future Study* (1997 data).

# Attitudes About Mathematics

**Table S25-1** Standard errors for the percentage of students who agreed with statements about mathematics, by grade level and sex: 1990, 1992, and 1996

| Statement and year | Grade 4 | | | Grade 8 | | | Grade 12 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Male | Female | Total | Male | Female | Total | Male | Female |
| I like mathematics | | | | | | | | | |
| 1990 | 1.0 | 1.3 | 1.3 | 1.6 | 1.8 | 2.1 | 1.4 | 1.7 | 1.8 |
| 1992 | 0.8 | 1.0 | 1.0 | 0.9 | 1.0 | 1.2 | 0.9 | 1.0 | 1.2 |
| 1996 | 0.9 | 1.2 | 1.1 | 1.1 | 1.2 | 1.5 | 0.8 | 1.1 | 1.0 |
| I am good at mathematics | | | | | | | | | |
| 1990 | 1.0 | 1.2 | 1.6 | 1.3 | 1.6 | 1.9 | 1.1 | 1.4 | 1.5 |
| 1992 | 0.8 | 0.9 | 1.1 | 0.7 | 1.0 | 1.1 | 0.7 | 0.8 | 0.9 |
| 1996 | 0.8 | 1.1 | 1.0 | 1.0 | 1.1 | 1.3 | 0.8 | 1.2 | 0.9 |

SOURCE: U.S. Department of Education, NCES. National Assessment of Educational Progress (NAEP), 1990, 1992, and 1996.

# First-time Kindergartners' Approaches to Learning

**Table S26-1** **Standard errors for the percentage distribution of first-time kindergartners according to the frequency with which teachers reported they persist at tasks, are eager to learn new things, and pay attention well, by child and family characteristics: Fall 1998**

| | Persist at tasks | | Eager to learn | | Attentive | |
|---|---|---|---|---|---|---|
| **Characteristic** | **Never/ sometimes** | **Often/ very often/** | **Never/ sometimes** | **Often/ very often** | **Never/ sometimes** | **Often/ very often** |
| **Total** | **0.6** | **0.6** | **0.5** | **0.5** | **0.6** | **0.6** |
| Sex | | | | | | |
| Male | 0.8 | 0.8 | 0.7 | 0.7 | 0.8 | 0.8 |
| Female | 0.7 | 0.7 | 0.6 | 0.6 | 0.6 | 0.6 |
| Mother's highest education level | | | | | | |
| Less than high school | 1.4 | 1.4 | 1.1 | 1.1 | 1.1 | 1.1 |
| High school diploma or equivalent | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Some college, including vocational/technical | 0.7 | 0.7 | 0.6 | 0.6 | 0.8 | 0.8 |
| Bachelor's degree or higher | 0.9 | 0.9 | 0.7 | 0.7 | 0.9 | 0.9 |
| Child's race-ethnicity | | | | | | |
| White | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| Black | 1.4 | 1.4 | 1.3 | 1.3 | 1.4 | 1.4 |
| Asian | 1.9 | 1.9 | 1.9 | 1.9 | 2.3 | 2.3 |
| Hispanic | 1.2 | 1.2 | 1.0 | 1.0 | 0.9 | 0.9 |

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study," Kindergarten Class of 1998–99", Fall 1998.

# Credits Earned in High School

**Table S27-1** **Standard errors for the average number of total and academic credits earned in high school, by race-ethnicity: Selected years 1982–98**

| | Total credits earned | | | | Total academic credits earned | | | |
|---|---|---|---|---|---|---|---|---|
| Year | Total | White | Black | Hispanic | Total | White | Black | Hispanic |
| 1982 | 0.09 | 0.10 | 0.17 | 0.14 | 0.09 | 0.10 | 0.20 | 0.13 |
| 1987 | 0.16 | 0.18 | 0.25 | 0.16 | 0.15 | 0.17 | 0.26 | 0.17 |
| 1990 | 0.12 | 0.12 | 0.24 | 0.19 | 0.11 | 0.12 | 0.19 | 0.22 |
| 1992 | 0.09 | 0.10 | 0.31 | 0.23 | 0.09 | 0.09 | 0.36 | 0.30 |
| 1994 | 0.14 | 0.17 | 0.13 | 0.12 | 0.09 | 0.10 | 0.13 | 0.13 |
| 1998 | 0.17 | 0.17 | 0.26 | 0.25 | 0.13 | 0.14 | 0.23 | 0.20 |

SOURCE: U.S. Department of Education, NCES. High School and Beyond Longitudinal Study of 1980 Sophomores,"Second Follow-up" (HS&B: 1980/1984); National Education Longitudinal Study of 1988 Eighth Graders," High School Transcript Study" (NELS:1992); and 1987, 1990, 1994, and 1998 National Assessment of Educational Progress (NAEP) High School Transcript Studies.

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## Event Dropout Rates, by Urbanicity

Table S28-1 Standard errors for the event dropout rates for 15- to 24-year-olds in grades 10–12, by urbanicity: 1990–98

| Year | Total | Urbanicity | | |
|---|---|---|---|---|
| | | Urban | Suburban | Rural |
| 1990 | 0.4 | 0.8 | 0.5 | 0.7 |
| 1991 | 0.3 | 0.7 | 0.4 | 0.7 |
| 1992 | 0.4 | 0.7 | 0.5 | 1.0 |
| 1993 | 0.4 | 0.7 | 0.4 | 0.7 |
| 1994 | — | — | — | — |
| 1995 | — | — | — | — |
| 1996 | 0.3 | 0.7 | 0.4 | 0.6 |
| 1997 | 0.3 | 0.6 | 0.4 | 0.6 |
| 1998 | 0.3 | 0.7 | 0.4 | 0.7 |

— Not available

SOURCE: U.S. Department of Commerce, Bureau of the Census. October Current Population Survey, various years, special tabulations.

## Later Completions by Dropouts

Table S29-1 Standard errors for the percentage distribution of 1980 and 1990 sophomores and dropouts according to completion status and percentage completing within 2 years of scheduled graduation, by mathematics achievement

| Mathematics achievement | Status in August following scheduled high school graduation | | | Status of August dropouts in spring 2 years following scheduled graduation | | | | Total completed spring 2 years following scheduled graduation |
|---|---|---|---|---|---|---|---|---|
| | Completed | Still enrolled | Dropout | Graduated | Alternative credential | Enrolled in high school | Still dropout | |
| | | | | 1990 sophomore cohort | | | | |
| **Total** | 0.5 | 0.4 | 0.4 | 3.6 | 1.4 | 2.9 | 3.2 | 0.4 |
| Mathematics achievement in 10th grade | | | | | | | | |
| Lowest quartile | 1.2 | 1.0 | 0.9 | 3.7 | 1.6 | 3.5 | 3.9 | 1.1 |
| Above lowest quartile | 0.4 | 0.3 | 0.3 | 6.8 | 2.8 | 5.0 | 5.3 | 0.3 |
| | | | | 1980 sophomore cohort | | | | |
| **Total** | 0.6 | 0.4 | 0.4 | 1.2 | 1.2 | 1.7 | 2.1 | 0.5 |
| Mathematics achievement in 10th grade | | | | | | | | |
| Lowest quartile | 1.0 | 0.7 | 0.9 | 1.5 | 1.3 | 2.2 | 2.6 | 1.0 |
| Above lowest quartile | 0.4 | 0.4 | 0.2 | 1.7 | 2.3 | 1.7 | 3.0 | 0.3 |

SOURCE: U.S. Department of Education, NCES. High School and Beyond Longitudinal Study of 1980 Sophomores, "Second Follow-up" (HS&B: 1980/1984), and National Education Longitudinal Study of 1988 Eighth Graders, "Third Follow-up" (NELS 1988/1994).

# Who Is Prepared for College

**Table S30-1** **Standard errors for the percentage of 1992 high school graduates qualified for admission at a 4-year institution, by level of qualification and family income**

| | Family income | | |
|---|---|---|---|
| College qualified | Less than $25,000 | $25,000–74,999 | $75,000 or more |
| **Total** | **1.3** | **1.0** | **1.5** |
| Minimally qualified | 1.0 | 0.7 | 1.1 |
| Somewhat qualified | 0.8 | 0.7 | 1.4 |
| Highly qualified | 0.9 | 0.9 | 1.6 |
| Very highly qualified | 0.6 | 0.7 | 2.0 |

SOURCE: U.S. Department of Education, NCES, National Education Longitudinal Study of 1988 Eighth Graders, "Third Follow-up" (NELS 1988/1994).

**Table S30-2** **Standard errors for the percentage distribution of 1992 high school graduates according to level of qualification for admission to a 4-year institution, by race-ethnicity**

| | Marginally or unqualified | College qualified | | | | |
|---|---|---|---|---|---|---|
| | | Total | Minimally | Somewhat | Highly | Very highly |
| **Total** | **0.8** | **0.8** | **0.5** | **0.5** | **0.6** | **0.6** |
| White | 0.9 | 0.9 | 0.6 | 0.6 | 0.7 | 0.7 |
| Black | 2.2 | 2.2 | 1.6 | 1.6 | 1.2 | 1.2 |
| Hispanic | 1.9 | 1.9 | 1.6 | 1.3 | 1.2 | 1.2 |
| Asian/Pacific Islander | 3.2 | 3.2 | 2.1 | 1.6 | 2.0 | 2.3 |
| American Indian/Alaskan Native | 5.3 | 5.3 | 5.4 | 5.4 | 1.8 | 0.8 |

SOURCE: U.S. Department of Education, NCES. National Education Longitudinal Study of 1988 Eighth Graders, "Third Follow-up" (NELS 1988/1994).

# Who Enrolls in Postsecondary Education

**Table S31-1** **Standard errors for the percentage of college-qualified 1992 high school graduates who enrolled in postsecondary education by 1994, by type of institution and family income**

| | Family income | | |
|---|---|---|---|
| | Less than $25,000 | $25,000–74,999 | $75,000 or more |
| College-qualified | | | |
| Any 4-year | 1.8 | 1.3 | 1.5 |
| Public 2-year | 1.4 | 1.2 | 1.4 |
| Other less-than-4-year | 0.7 | 0.5 | 0.4 |
| College-qualified and took steps | | | |
| Any 4-year | 1.7 | 1.3 | 1.2 |
| Public 2-year | 1.6 | 1.2 | 1.0 |
| Other less-than-4-year | 0.6 | 0.3 | 0.3 |

SOURCE: U.S. Department of Education, NCES. National Education Longitudinal Study of 1988 Eighth Graders, Third Follow-up (NELS 1988/1994).

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# Immediate Transition to College

**Table S32-1** Standard errors for the percentage of high school completers who were enrolled in college the October after completing high school, by family income and race-ethnicity: October 1972–98

| | | Family income | | | | Race-ethnicity | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Low | | Middle | High | White | Black | | Hispanic | |
| October | Total | Annual | 3-year average | Annual | Annual | Annual | Annual | 3-year average | Annual | 3-year average |
| 1972 | 1.3 | 3.4 | (*) | 1.7 | 2.2 | 1.4 | 4.6 | (*) | 9.7 | (*) |
| 1973 | 1.3 | 3.2 | (*) | 1.7 | 2.1 | 1.4 | 4.3 | 2.6 | 9.0 | 5.3 |
| 1974 | 1.3 | — | — | — | — | 1.4 | 4.6 | 2.6 | 8.9 | 5.1 |
| 1975 | 1.3 | 3.6 | (*) | 1.7 | 2.1 | 1.4 | 4.7 | 2.7 | 8.4 | 4.9 |
| 1976 | 1.3 | 4.2 | 2.2 | 1.8 | 2.1 | 1.4 | 4.8 | 2.7 | 8.0 | 4.7 |
| 1977 | 1.3 | 3.5 | 2.2 | 1.8 | 2.0 | 1.4 | 4.7 | 2.7 | 8.0 | 4.7 |
| 1978 | 1.3 | 3.7 | 2.1 | 1.7 | 2.1 | 1.4 | 4.5 | 2.7 | 8.4 | 4.7 |
| 1979 | 1.3 | 3.8 | 2.1 | 1.7 | 2.0 | 1.4 | 4.7 | 2.6 | 7.9 | 4.8 |
| 1980 | 1.3 | 3.5 | 2.1 | 1.8 | 2.1 | 1.4 | 4.4 | 2.6 | 8.7 | 4.8 |
| 1981 | 1.3 | 3.9 | 2.1 | 1.7 | 2.1 | 1.4 | 4.4 | 2.5 | 8.2 | 4.7 |
| 1982 | 1.4 | 3.8 | 2.3 | 1.8 | 2.1 | 1.5 | 4.3 | 2.6 | 8.0 | 4.9 |
| 1983 | 1.4 | 4.0 | 2.2 | 1.9 | 2.2 | 1.6 | 4.3 | 2.5 | 9.0 | 4.7 |
| 1984 | 1.4 | 3.6 | 2.3 | 1.9 | 2.1 | 1.5 | 4.1 | 2.5 | 7.7 | 4.9 |
| 1985 | 1.4 | 4.1 | 2.2 | 2.0 | 2.2 | 1.6 | 4.8 | 2.5 | 9.8 | 5.2 |
| 1986 | 1.4 | 3.6 | 2.2 | 2.0 | 2.3 | 1.6 | 4.4 | 2.7 | 8.9 | 5.2 |
| 1987 | 1.5 | 3.9 | 2.2 | 2.1 | 2.2 | 1.7 | 4.8 | 2.7 | 8.3 | 5.0 |
| 1988 | 1.6 | 4.4 | 2.5 | 2.1 | 2.5 | 1.8 | 4.9 | 3.0 | 10.1 | 6.0 |
| 1989 | 1.6 | 4.6 | 2.7 | 2.3 | 2.6 | 1.9 | 5.3 | 3.0 | 10.5 | 6.3 |
| 1990 | 1.6 | 4.8 | 2.6 | 2.1 | 2.5 | 1.8 | 5.1 | 3.0 | 10.8 | 5.7 |
| 1991 | 1.6 | 4.5 | 2.6 | 2.2 | 2.4 | 1.8 | 5.2 | 2.9 | 9.6 | 5.5 |
| 1992 | 1.6 | 4.4 | 2.6 | 2.2 | 2.3 | 1.8 | 4.9 | 3.0 | 8.5 | 5.0 |
| 1993 | 1.6 | 4.6 | 2.6 | 2.1 | 2.5 | 1.9 | 5.3 | 3.0 | 8.2 | 5.0 |
| 1994 | 1.4 | 4.0 | 2.3 | 1.9 | 2.2 | 1.6 | 4.4 | 2.5 | 6.3 | 3.2 |
| 1995 | 1.4 | 3.6 | 2.2 | 2.0 | 1.9 | 1.6 | 4.2 | 2.4 | 4.9 | 3.2 |
| 1996 | 1.4 | 3.8 | 2.2 | 1.9 | 2.3 | 1.7 | 4.0 | 2.4 | 5.8 | 3.0 |
| 1997 | 1.4 | 3.7 | 2.1 | 2.0 | 2.0 | 1.6 | 4.1 | 2.4 | 4.5 | 2.9 |
| 1998 | 1.4 | 3.6 | (*) | 1.9 | 2.2 | 1.6 | 4.0 | (*) | 4.9 | (*) |

— Not available

* Not applicable

SOURCE: U.S. Department of Commerce, Bureau of the Census. October Current Population Surveys.

# Immediate Transition to College

**Table S32-2** Standard errors for the percentage of high school completers who were enrolled in college the October after completing high school, by parents' highest education level: October 1990–98

| Parents' highest education level | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|---|---|---|---|---|---|---|---|---|---|
| **Total** | **1.6** | **1.6** | **1.6** | **1.6** | **1.4** | **1.4** | **1.4** | **1.4** | **1.4** |
| Less than high school diploma | 4.9 | 4.9 | 5.0 | 6.0 | 5.0 | 4.4 | 5.6 | 5.5 | 5.6 |
| High school diploma or GED | 2.8 | 3.0 | 3.0 | 2.9 | 3.0 | 2.9 | 2.8 | 3.0 | 2.8 |
| Some college | 3.4 | 3.3 | 3.0 | 3.3 | 2.8 | 2.5 | 2.7 | 2.7 | 2.6 |
| Bachelor's degree or higher | 2.4 | 2.2 | 2.4 | 2.1 | 2.1 | 1.8 | 2.0 | 1.9 | 2.1 |
| Not available | 5.7 | 5.7 | 5.4 | 5.0 | 4.2 | 4.2 | 4.4 | 4.0 | 4.2 |

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

**Table S32-3** Standard errors for the percentage of high school completers who were enrolled in college the October after completing high school, by sex and type of institution: October 1972–98

| | Male | | | Female | | |
|---|---|---|---|---|---|---|
| October | Total | 2-year | 4-year | Total | 2-year | 4-year |
| 1972 | 1.9 | — | — | 1.8 | — | — |
| 1973 | 1.9 | 1.3 | 1.8 | 1.8 | 1.3 | 1.6 |
| 1974 | 1.8 | 1.4 | 1.7 | 1.8 | 1.2 | 1.7 |
| 1975 | 1.8 | 1.4 | 1.7 | 1.7 | 1.3 | 1.6 |
| 1976 | 1.9 | 1.3 | 1.8 | 1.8 | 1.4 | 1.7 |
| 1977 | 1.9 | 1.4 | 1.8 | 1.8 | 1.4 | 1.6 |
| 1978 | 1.9 | 1.4 | 1.8 | 1.8 | 1.4 | 1.6 |
| 1979 | 1.9 | 1.4 | 1.8 | 1.8 | 1.4 | 1.6 |
| 1980 | 1.9 | 1.4 | 1.7 | 1.8 | 1.5 | 1.7 |
| 1981 | 1.9 | 1.5 | 1.8 | 1.8 | 1.5 | 1.7 |
| 1982 | 2.0 | 1.5 | 1.8 | 1.9 | 1.5 | 1.8 |
| 1983 | 2.0 | 1.6 | 1.9 | 1.9 | 1.5 | 1.8 |
| 1984 | 2.0 | 1.5 | 2.0 | 1.9 | 1.6 | 1.8 |
| 1985 | 2.1 | 1.7 | 2.1 | 2.0 | 1.6 | 2.0 |
| 1986 | 2.1 | 1.7 | 2.0 | 2.0 | 1.5 | 1.9 |
| 1987 | 2.1 | 1.6 | 2.1 | 2.0 | 1.6 | 2.0 |
| 1988 | 2.2 | 1.9 | 2.2 | 2.2 | 1.9 | 2.2 |
| 1989 | 2.4 | 1.8 | 2.3 | 2.3 | 2.0 | 2.3 |
| 1990 | 2.3 | 1.8 | 2.3 | 2.2 | 1.9 | 2.3 |
| 1991 | 2.3 | 2.0 | 2.2 | 2.2 | 2.1 | 2.3 |
| 1992 | 2.2 | 1.9 | 2.2 | 2.2 | 2.0 | 2.3 |
| 1993 | 2.3 | 2.0 | 2.3 | 2.2 | 1.9 | 2.2 |
| 1994 | 2.0 | 1.8 | 2.0 | 2.0 | 1.6 | 2.1 |
| 1995 | 2.0 | 1.8 | 2.0 | 1.9 | 1.5 | 2.0 |
| 1996 | 2.1 | 1.8 | 2.1 | 1.9 | 1.8 | 2.1 |
| 1997 | 2.0 | 1.7 | 2.1 | 1.9 | 1.7 | 2.0 |
| 1998 | 2.0 | 1.7 | 2.0 | 1.9 | 1.8 | 2.1 |

— Not available.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

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# Enrollment of Students With Risk Factors

Table S33-1 Standard errors for the percentage of 1992 high school graduates with risk factors for low educational attainment, and percentage distribution according to type of institution first enrolled

| | | Type of institution first enrolled | | | |
|---|---|---|---|---|---|
| Risk factors | Percent of all students | 4-year | Public 2-year | Other less-than-4-year | Never enrolled |
| Number of risk factors | | | | | |
| No risk factors | 0.7 | 1.2 | 1.0 | 0.3 | 0.7 |
| Any risk factors | 0.7 | 0.9 | 1.0 | 0.5 | 0.9 |
| One risk factor | 0.6 | 1.3 | 1.1 | 0.7 | 0.9 |
| Two risk factors | 0.5 | 1.3 | 1.6 | 0.7 | 1.6 |
| Three or more risk factors | 0.4 | 1.3 | 2.9 | 1.1 | 2.6 |
| Risk factors | | | | | |
| Changed schools two or more times from 1st to 8th grade | 0.7 | 1.5 | 1.5 | 0.9 | 1.2 |
| Lowest SES quartile | 0.6 | 1.1 | 1.5 | 0.7 | 1.6 |
| Average grades C's or lower from 6th to 8th grade | 0.6 | 1.1 | 1.9 | 0.9 | 1.7 |
| Single-parent family | 0.6 | 1.7 | 2.0 | 0.7 | 1.7 |
| One or more older siblings left high school | 0.4 | 1.6 | 1.7 | 1.0 | 2.0 |
| Held back one or more grades from 1st to 8th grade | 0.5 | 1.6 | 2.5 | 0.8 | 2.3 |

SOURCE: U.S. Department of Education, NCES. National Education Longitudinal Study of 1988 Eighth Graders (NELS:1988/1994), Data Analysis System.

## Enrollment of Students With Risk Factors

**Table S33-2** **Standard errors for the percentage of 1992 high school graduates with risk factors who enrolled in a 4-year college by 1994**

| | |
|---|---|
| Student's 10th-grade aspirations | |
| Less than a bachelor's degree | 0.8 |
| Bachelor's degree or higher | 1.2 |
| High school mathematics | |
| Non- or low-academic | 0.8 |
| Algebra I and Geometry | 1.0 |
| Algebra II | 1.8 |
| Advanced academic | 1.8 |
| Academic preparation | |
| Not prepared | (*) |
| At least minimally prepared | 1.2 |
| Help with postsecondary application | |
| High school did not help | 1.1 |
| High school helped | 1.4 |
| Extracurricular activities: 1990 | |
| None | 1.5 |
| One | 1.2 |
| 2 or more | 1.4 |
| Parents' highest educational level | |
| High school diploma or less | 1.1 |
| Some postsecondary education | 1.3 |
| Bachelor's degree or higher | 2.2 |
| School-related discussions with parents: 1992 | |
| Infrequent or none | 1.5 |
| Moderately frequent | 1.2 |
| Very frequent | 1.8 |
| Friends who plan to attend 4-year college | |
| Few to some | 1.1 |
| Most | 1.4 |

* Percentage less than 0.05.

SOURCE: U.S. Department of Education, NCES, National Education Longitudinal Study of 1988 Eighth Graders (NELS:1988/1994), Data Analysis System.

# Remediation and Degree Completion

Table S34-1 Standard errors for the percentage distribution of postsecondary education students in degree-granting institutions, by type and amount of remedial coursework and degree completion: 1980–93

| | Type and amount of remedial coursework | | | | |
|---|---|---|---|---|---|
| **Highest degree** | **Any reading** | **Two or fewer courses: mathematics only** | **Two or more courses but no reading courses (and not two mathematics courses)** | **Only one course, not mathematics or reading** | **No courses** |
| None | 2.0 | 2.1 | 1.8 | 2.4 | 1.3 |
| Associate's | 1.5 | 1.1 | 1.5 | 1.3 | 0.5 |
| Bachelor's or more | 1.6 | 2.0 | 1.6 | 2.4 | 1.3 |

SOURCE: U.S. Department of Education, NCES. High School and Beyond Longitudinal Study of 1980 Sophomores, "Postsecondary Education Transcript Study" (HS&B:So PETS).

Table S34-2 Standard errors for the percentage distribution of students who took any remedial reading or mathematics courses in college according to other remedial coursework taken: 1980–93

| | Number of additional remedial courses | | | | | | |
|---|---|---|---|---|---|---|---|
| **Remedial courses** | **None** | **One** | **Two** | **Three** | **Four or more** | **Any remedial mathematics** | **Any remedial reading** |
| Any remedial reading courses | 1.4 | 2.0 | 1.7 | 1.3 | 1.9 | 1.0 | — |
| Any remedial mathematics courses | 1.3 | 1.1 | 1.0 | 0.6 | 0.8 | — | 1.0 |

— Not applicable.

SOURCE: U.S. Department of Education, NCES. High School and Beyond Longitudinal Study of 1980 Sophomores, "Postsecondary Education Transcript Study" (HS&B:So PETS).

Table S34-3 Standard errors for the percentage distribution of postsecondary education students by type and amount of remedial coursework in college and types of degree-granting institutions attended: 1980–93

| | | | Type and amount of remedial coursework | | | | |
|---|---|---|---|---|---|---|---|
| **Institution attended** | **Percentage of all students** | **Total** | **Two or fewer courses: Any reading** | **Two or more courses but no reading courses (and not mathematics only** | **Only one course, two mathematicsnot courses)** | **mathematics or reading** | **No courses** |
| **Total** | — | — | 0.5 | 0.6 | 0.6 | 0.4 | 0.8 |
| 4-year only | 1.0 | — | 0.6 | 0.8 | 0.7 | 0.6 | 1.2 |
| 2-year only | 0.8 | — | 1.2 | 1.0 | 1.2 | 0.9 | 1.5 |
| 2-year and 4-year only | 0.7 | — | 1.1 | 1.4 | 1.6 | 0.9 | 1.6 |
| Other combinations | 0.4 | — | 1.8 | 2.1 | 2.1 | 1.3 | 2.5 |

— Not applicable.

SOURCE: U.S. Department of Education, NCES. High School and Beyond Longitudinal Study of 1980 Sophomores, "Postsecondary Education Transcript Study" (HS&B:So PETS).

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## Persistence Toward a Bachelor's Degree

**Table S35** **Standard errors for percentage of students beginning postsecondary education at 4-year institutions in 1995–96 who were enrolled at any 4-year institution 3 years later, by presence of risk factors and curriculum completed**

| | |
|---|---|
| Total | |
| At risk | 1.7 |
| Not at risk | 1.2 |
| Did not complete New Basics curriculum | |
| At risk | 3.2 |
| Not at risk | 2.5 |
| Completed only New Basics curriculum | |
| At risk | 2.1 |
| Not at risk | 1.9 |
| Completed more advanced mathematics/science curriculum | |
| At risk | 3.1 |
| Not at risk | 2.2 |

SOURCE: U.S. Department of Education, NCES. 1996 Beginning Postsecondary Students Longitudinal Study, "First Follow-up" (BPS:1996/1998).

## Sex Differences in Graduate/Professional Enrollment

**Table S36** **Standard errors for percentage distribution of 1992–93 bachelor's degree recipients who enrolled in a graduate or first-professional progam by 1997 according to graduate field of study**

| Graduate field of study | Male | Female |
|---|---|---|
| Business and management | 1.48 | 1.24 |
| Education | 0.97 | 1.41 |
| Medicine/dentistry | 0.92 | 0.47 |
| Other health sciences | 0.95 | 1.01 |
| Law | 0.92 | 0.75 |
| Engineering/mathematics/computer science | 1.15 | 0.53 |
| Life and physical sciences | 0.84 | 0.45 |
| Social and behavioral sciences | 0.77 | 0.96 |
| Arts and humanities | 0.94 | 0.77 |
| Other | 0.67 | 0.69 |

SOURCE: U.S. Department of Education, NCES. Baccalaureate and Beyond Longitudinal Study, "Second Follow-up" (B&B:1993/1997).

# Educational Attainment

**Table S38-1** Standard errors for the percentage of 25- to 29-year-olds who have completed at least high school, by race-ethnicity and sex: March 1971–99

| | All | | | White | | | Black | | | Hispanic | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| March | Total | Male | Female | Total | Male | Female | Total | Male | Female | Total | Male | Female |
| 1971 | 0.5 | 0.7 | 0.7 | 0.5 | 0.7 | 0.7 | 2.2 | 3.2 | 2.9 | 2.9 | 4.3 | 3.9 |
| 1972 | 0.5 | 0.7 | 0.7 | 0.5 | 0.7 | 0.7 | 2.1 | 3.2 | 2.8 | 2.9 | 4.3 | 4.0 |
| 1973 | 0.5 | 0.7 | 0.7 | 0.5 | 0.7 | 0.7 | 2.0 | 3.0 | 2.7 | 2.6 | 3.8 | 3.5 |
| 1974 | 0.4 | 0.6 | 0.6 | 0.4 | 0.6 | 0.6 | 1.9 | 2.8 | 2.6 | 2.5 | 3.6 | 3.4 |
| 1975 | 0.4 | 0.6 | 0.6 | 0.4 | 0.6 | 0.6 | 1.8 | 2.7 | 2.5 | 2.5 | 3.5 | 3.4 |
| 1976 | 0.4 | 0.5 | 0.6 | 0.4 | 0.5 | 0.6 | 1.7 | 2.7 | 2.3 | 2.5 | 3.6 | 3.4 |
| 1977 | 0.4 | 0.5 | 0.6 | 0.4 | 0.5 | 0.6 | 1.7 | 2.4 | 2.3 | 2.5 | 3.6 | 3.4 |
| 1978 | 0.4 | 0.5 | 0.6 | 0.4 | 0.5 | 0.6 | 1.6 | 2.4 | 2.2 | 2.3 | 3.3 | 3.2 |
| 1979 | 0.4 | 0.5 | 0.5 | 0.4 | 0.5 | 0.5 | 1.6 | 2.5 | 2.2 | 2.3 | 3.4 | 3.2 |
| 1980 | 0.4 | 0.5 | 0.5 | 0.4 | 0.5 | 0.5 | 1.5 | 2.3 | 2.0 | 2.2 | 3.1 | 3.0 |
| 1981 | 0.4 | 0.5 | 0.5 | 0.3 | 0.5 | 0.5 | 1.5 | 2.1 | 2.0 | 2.1 | 3.0 | 2.9 |
| 1982 | 0.4 | 0.5 | 0.5 | 0.4 | 0.5 | 0.5 | 1.4 | 2.1 | 1.9 | 2.1 | 3.1 | 2.9 |
| 1983 | 0.4 | 0.5 | 0.5 | 0.4 | 0.5 | 0.5 | 1.4 | 2.1 | 1.9 | 2.2 | 3.1 | 3.0 |
| 1984 | 0.4 | 0.5 | 0.5 | 0.4 | 0.5 | 0.5 | 1.4 | 2.2 | 1.8 | 2.1 | 3.0 | 2.9 |
| 1985 | 0.4 | 0.5 | 0.5 | 0.4 | 0.5 | 0.5 | 1.4 | 2.0 | 1.9 | 2.1 | 3.1 | 2.9 |
| 1986 | 0.4 | 0.5 | 0.5 | 0.4 | 0.5 | 0.5 | 1.3 | 1.7 | 1.8 | 2.0 | 2.9 | 2.9 |
| 1987 | 0.4 | 0.5 | 0.5 | 0.4 | 0.5 | 0.5 | 1.3 | 1.8 | 1.8 | 2.0 | 2.8 | 2.8 |
| 1988 | 0.4 | 0.6 | 0.5 | 0.4 | 0.6 | 0.5 | 1.5 | 2.2 | 2.0 | 2.3 | 3.2 | 3.2 |
| 1989 | 0.4 | 0.6 | 0.5 | 0.4 | 0.6 | 0.5 | 1.4 | 2.2 | 1.9 | 2.2 | 3.1 | 3.2 |
| 1990 | 0.4 | 0.6 | 0.5 | 0.4 | 0.6 | 0.5 | 1.4 | 2.1 | 1.9 | 2.0 | 2.7 | 2.8 |
| 1991 | 0.4 | 0.6 | 0.5 | 0.4 | 0.6 | 0.5 | 1.4 | 1.9 | 1.9 | 2.0 | 2.8 | 2.9 |
| 1992 | 0.4 | 0.5 | 0.5 | 0.4 | 0.6 | 0.5 | 1.4 | 2.0 | 2.0 | 2.0 | 2.7 | 2.9 |
| 1993 | 0.4 | 0.6 | 0.5 | 0.4 | 0.6 | 0.5 | 1.4 | 1.9 | 2.0 | 1.9 | 2.6 | 2.8 |
| 1994 | 0.4 | 0.5 | 0.5 | 0.4 | 0.5 | 0.5 | 1.1 | 1.7 | 1.5 | 1.2 | 1.7 | 1.8 |
| 1995 | 0.4 | 0.5 | 0.5 | 0.3 | 0.5 | 0.5 | 1.0 | 1.5 | 1.5 | 1.3 | 1.7 | 1.8 |
| 1996 | 0.4 | 0.5 | 0.5 | 0.4 | 0.5 | 0.5 | 1.1 | 1.6 | 1.6 | 1.3 | 1.7 | 1.9 |
| 1997 | 0.4 | 0.5 | 0.5 | 0.3 | 0.5 | 0.5 | 1.1 | 1.7 | 1.4 | 1.2 | 1.7 | 1.8 |
| 1998 | 0.4 | 0.5 | 0.5 | 0.3 | 0.5 | 0.4 | 1.0 | 1.5 | 1.4 | 1.2 | 1.7 | 1.8 |
| 1999 | 0.4 | 0.6 | 0.5 | 0.4 | 0.5 | 0.5 | 1.0 | 1.6 | 1.4 | 1.3 | 1.8 | 1.8 |

SOURCE: U.S. Department of Commerce, Bureau of the Census. March Current Population Surveys, various years.

# Educational Attainment

**Table S38-2** **Standard errors for the percentage of 25- to 29-year-olds who have completed at least some college, by race-ethnicity and sex: March 1971–99**

| | All | | | White | | | Black | | | Hispanic | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| March | Total | Male | Female | Total | Male | Female | Total | Male | Female | Total | Male | Female |
| 1971 | 0.7 | 1.0 | 0.9 | 0.7 | 1.0 | 1.0 | 2.6 | 3.9 | 3.6 | 3.8 | 5.8 | 4.9 |
| 1972 | 0.7 | 0.9 | 0.9 | 0.7 | 1.0 | 1.0 | 2.6 | 3.9 | 3.4 | 4.0 | 6.0 | 5.2 |
| 1973 | 0.6 | 0.9 | 0.9 | 0.7 | 1.0 | 1.0 | 2.5 | 3.7 | 3.3 | 3.3 | 5.0 | 4.2 |
| 1974 | 0.6 | 0.9 | 0.9 | 0.7 | 1.0 | 1.0 | 2.4 | 3.5 | 3.2 | 3.3 | 4.8 | 4.5 |
| 1975 | 0.6 | 0.9 | 0.9 | 0.7 | 0.9 | 0.9 | 2.3 | 3.5 | 3.1 | 3.3 | 4.9 | 4.4 |
| 1976 | 0.6 | 0.8 | 0.8 | 0.6 | 0.9 | 0.9 | 2.2 | 3.4 | 2.9 | 3.2 | 4.8 | 4.2 |
| 1977 | 0.6 | 0.8 | 0.8 | 0.6 | 0.9 | 0.9 | 2.2 | 3.2 | 3.0 | 3.3 | 4.6 | 4.6 |
| 1978 | 0.6 | 0.8 | 0.8 | 0.6 | 0.9 | 0.9 | 2.2 | 3.2 | 2.9 | 3.1 | 4.4 | 4.3 |
| 1979 | 0.6 | 0.8 | 0.8 | 0.6 | 0.9 | 0.9 | 2.1 | 3.2 | 2.9 | 3.1 | 4.6 | 4.1 |
| 1980 | 0.6 | 0.8 | 0.8 | 0.6 | 0.9 | 0.9 | 2.0 | 3.0 | 2.7 | 2.8 | 4.1 | 3.8 |
| 1981 | 0.6 | 0.8 | 0.8 | 0.6 | 0.9 | 0.9 | 2.0 | 2.9 | 2.7 | 2.7 | 3.9 | 3.6 |
| 1982 | 0.6 | 0.8 | 0.8 | 0.6 | 0.9 | 0.9 | 2.0 | 3.0 | 2.7 | 2.7 | 4.0 | 3.8 |
| 1983 | 0.6 | 0.8 | 0.8 | 0.6 | 0.9 | 0.9 | 2.0 | 2.9 | 2.7 | 2.9 | 4.1 | 4.0 |
| 1984 | 0.6 | 0.8 | 0.8 | 0.6 | 0.9 | 0.9 | 1.9 | 2.9 | 2.6 | 2.8 | 4.1 | 3.8 |
| 1985 | 0.6 | 0.8 | 0.8 | 0.6 | 0.9 | 0.9 | 1.9 | 2.8 | 2.6 | 2.8 | 4.1 | 3.8 |
| 1986 | 0.6 | 0.8 | 0.8 | 0.6 | 0.9 | 0.9 | 1.9 | 2.7 | 2.6 | 2.6 | 3.8 | 3.7 |
| 1987 | 0.6 | 0.8 | 0.8 | 0.6 | 0.9 | 0.9 | 1.9 | 2.7 | 2.6 | 2.6 | 3.7 | 3.7 |
| 1988 | 0.6 | 0.9 | 0.8 | 0.7 | 1.0 | 1.0 | 2.0 | 3.0 | 2.8 | 2.9 | 4.2 | 4.2 |
| 1989 | 0.6 | 0.9 | 0.8 | 0.7 | 1.0 | 1.0 | 2.0 | 3.0 | 2.7 | 2.9 | 4.0 | 4.2 |
| 1990 | 0.6 | 0.8 | 0.8 | 0.7 | 1.0 | 0.9 | 2.0 | 2.9 | 2.7 | 2.6 | 3.6 | 3.6 |
| 1991 | 0.6 | 0.8 | 0.8 | 0.7 | 1.0 | 1.0 | 2.0 | 2.8 | 2.7 | 2.6 | 3.6 | 3.8 |
| 1992 | 0.6 | 0.9 | 0.8 | 0.7 | 1.0 | 1.0 | 2.0 | 2.9 | 2.8 | 2.6 | 3.5 | 3.8 |
| 1993 | 0.6 | 0.9 | 0.8 | 0.7 | 1.0 | 1.0 | 2.0 | 2.9 | 2.8 | 2.5 | 3.5 | 3.6 |
| 1994 | 0.6 | 0.8 | 0.8 | 0.6 | 0.9 | 0.9 | 1.7 | 2.5 | 2.3 | 1.6 | 2.2 | 2.4 |
| 1995 | 0.6 | 0.8 | 0.8 | 0.6 | 0.9 | 0.9 | 1.6 | 2.4 | 2.3 | 1.7 | 2.3 | 2.4 |
| 1996 | 0.6 | 0.8 | 0.8 | 0.7 | 0.9 | 0.9 | 1.7 | 2.6 | 2.4 | 1.7 | 2.3 | 2.5 |
| 1997 | 0.6 | 0.8 | 0.8 | 0.7 | 0.9 | 0.9 | 1.7 | 2.6 | 2.3 | 1.6 | 2.3 | 2.3 |
| 1998 | 0.6 | 0.8 | 0.8 | 0.7 | 1.0 | 0.9 | 1.7 | 2.5 | 2.3 | 1.6 | 2.2 | 2.3 |
| 1999 | 0.6 | 0.8 | 0.8 | 0.7 | 1.0 | 0.9 | 1.7 | 2.6 | 2.2 | 1.6 | 2.4 | 2.3 |

SOURCE U.S. Department of Commerce, Bureau of the Census. March Current Population Surveys, various years.

# Educational Attainment

**Table S38-3** **Standard errors for the percentage of 25- to 29-year-old high school completers with a bachelor's degree or higher, by race-ethnicity and sex: March 1971–99**

| | All | | | White | | | Black | | | Hispanic | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| March | Total | Male | Female | Total | Male | Female | Total | Male | Female | Total | Male | Female |
| 1971 | 0.6 | 0.8 | 0.7 | 0.6 | 0.9 | 0.8 | 1.8 | 2.8 | 2.4 | 2.5 | 4.3 | 2.7 |
| 1972 | 0.6 | 0.8 | 0.8 | 0.6 | 0.9 | 0.8 | 1.8 | 2.6 | 2.5 | 2.3 | 3.6 | 2.8 |
| 1973 | 0.5 | 0.8 | 0.7 | 0.6 | 0.9 | 0.8 | 1.8 | 2.5 | 2.4 | 2.2 | 3.4 | 2.9 |
| 1974 | 0.5 | 0.8 | 0.7 | 0.6 | 0.9 | 0.8 | 1.6 | 2.4 | 2.1 | 2.0 | 2.7 | 3.0 |
| 1975 | 0.5 | 0.8 | 0.7 | 0.6 | 0.9 | 0.8 | 1.7 | 2.6 | 2.3 | 2.5 | 3.9 | 3.2 |
| 1976 | 0.5 | 0.8 | 0.7 | 0.6 | 0.8 | 0.8 | 1.8 | 2.6 | 2.4 | 2.2 | 3.7 | 2.5 |
| 1977 | 0.5 | 0.8 | 0.7 | 0.6 | 0.9 | 0.8 | 1.7 | 2.4 | 2.3 | 2.1 | 3.0 | 3.0 |
| 1978 | 0.5 | 0.8 | 0.7 | 0.6 | 0.9 | 0.8 | 1.6 | 2.2 | 2.2 | 2.3 | 3.3 | 3.4 |
| 1979 | 0.5 | 0.8 | 0.7 | 0.6 | 0.8 | 0.8 | 1.6 | 2.5 | 2.1 | 2.1 | 3.2 | 2.7 |
| 1980 | 0.5 | 0.7 | 0.7 | 0.6 | 0.8 | 0.8 | 1.5 | 2.1 | 2.0 | 2.0 | 3.0 | 2.6 |
| 1981 | 0.5 | 0.7 | 0.7 | 0.5 | 0.8 | 0.7 | 1.4 | 2.1 | 1.9 | 1.8 | 2.8 | 2.3 |
| 1982 | 0.5 | 0.7 | 0.7 | 0.6 | 0.8 | 0.8 | 1.5 | 2.1 | 2.0 | 2.0 | 3.1 | 2.7 |
| 1983 | 0.5 | 0.7 | 0.7 | 0.6 | 0.8 | 0.8 | 1.5 | 2.2 | 2.0 | 2.2 | 3.1 | 3.1 |
| 1984 | 0.5 | 0.7 | 0.7 | 0.6 | 0.8 | 0.8 | 1.4 | 2.2 | 1.8 | 2.2 | 3.1 | 3.0 |
| 1985 | 0.5 | 0.7 | 0.7 | 0.6 | 0.8 | 0.8 | 1.4 | 1.9 | 1.9 | 2.1 | 3.2 | 2.9 |
| 1986 | 0.5 | 0.7 | 0.7 | 0.6 | 0.8 | 0.8 | 1.3 | 1.8 | 1.9 | 1.9 | 2.7 | 2.7 |
| 1987 | 0.5 | 0.7 | 0.7 | 0.6 | 0.8 | 0.8 | 1.3 | 1.9 | 1.8 | 1.8 | 2.7 | 2.5 |
| 1988 | 0.5 | 0.8 | 0.7 | 0.6 | 0.9 | 0.8 | 1.5 | 2.2 | 2.0 | 2.3 | 3.3 | 3.1 |
| 1989 | 0.5 | 0.8 | 0.7 | 0.6 | 0.9 | 0.9 | 1.5 | 2.2 | 2.0 | 2.2 | 2.9 | 3.2 |
| 1990 | 0.5 | 0.8 | 0.7 | 0.6 | 0.9 | 0.8 | 1.5 | 2.3 | 1.9 | 1.8 | 2.4 | 2.7 |
| 1991 | 0.5 | 0.8 | 0.7 | 0.6 | 0.9 | 0.9 | 1.3 | 2.0 | 1.8 | 2.0 | 2.6 | 3.0 |
| 1992 | 0.5 | 0.8 | 0.8 | 0.6 | 0.9 | 0.9 | 1.4 | 2.0 | 1.9 | 1.9 | 2.5 | 2.8 |
| 1993 | 0.5 | 0.8 | 0.8 | 0.6 | 0.9 | 0.9 | 1.5 | 2.1 | 2.1 | 1.7 | 2.3 | 2.6 |
| 1994 | 0.5 | 0.7 | 0.7 | 0.6 | 0.9 | 0.8 | 1.2 | 1.8 | 1.7 | 1.1 | 1.4 | 1.7 |
| 1995 | 0.5 | 0.7 | 0.7 | 0.6 | 0.9 | 0.9 | 1.3 | 1.9 | 1.7 | 1.2 | 1.6 | 1.8 |
| 1996 | 0.5 | 0.8 | 0.8 | 0.7 | 0.9 | 0.9 | 1.3 | 1.8 | 1.9 | 1.2 | 1.7 | 1.8 |
| 1997 | 0.6 | 0.8 | 0.8 | 0.7 | 0.9 | 0.9 | 1.3 | 1.8 | 1.8 | 1.2 | 1.7 | 1.9 |
| 1998 | 0.6 | 0.8 | 0.8 | 0.7 | 0.9 | 1.0 | 1.3 | 1.9 | 1.8 | 1.2 | 1.6 | 1.7 |
| 1999 | 0.6 | 0.8 | 0.8 | 0.7 | 1.0 | 1.0 | 1.3 | 1.9 | 1.8 | 1.2 | 1.6 | 1.7 |

SOURCE: U.S. Department of Commerce, Bureau of the Census. March Current Population Surveys, various years.

# Coursetaking in Advanced Mathematics and Science

**Table S39-1** Standard errors for the percentage distribution of high school graduates according to various levels of mathematics courses taken, by student and school characteristics: 1998

| Student and school characteristic | No mathematics | Non-academic | Low academic | Middle academic | | | Advanced academic | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Total | Level I | Level II | Total | Level I | Level II | Level III |
| **Total** | **0.1** | **0.3** | **0.5** | **1.3** | **1.0** | **1.1** | **1.4** | **1.2** | **1.1** | **0.9** |
| Sex | | | | | | | | | | |
| Male | 0.2 | 0.4 | 0.5 | 1.6 | 1.1 | 1.3 | 1.8 | 1.1 | 1.4 | 0.9 |
| Female | 0.1 | 0.4 | 0.5 | 1.5 | 1.0 | 1.2 | 1.4 | 1.4 | 1.1 | 1.0 |
| Race-ethnicity | | | | | | | | | | |
| White | 0.2 | 0.3 | 0.5 | 1.6 | 1.1 | 1.3 | 1.6 | 1.4 | 1.3 | 0.9 |
| Black | 0.2 | 0.8 | 0.9 | 2.1 | 1.7 | 1.7 | 2.1 | 2.0 | 0.9 | 1.7 |
| Hispanic | 0.2 | 1.1 | 1.0 | 2.1 | 1.3 | 1.9 | 2.1 | 1.0 | 1.2 | 1.2 |
| Asian/Pacific Islander | 0.1 | 0.7 | 0.6 | 2.0 | 1.8 | 1.7 | 2.7 | 1.2 | 1.5 | 3.4 |
| American Indian/ Alaskan Native | 0.7 | 2.6 | 1.7 | 3.9 | 3.2 | 3.5 | 4.0 | 1.9 | 3.6 | 2.2 |
| Met core New Basics | | | | | | | | | | |
| Yes | 0.2 | 0.2 | 0.5 | 1.7 | 0.8 | 1.5 | 1.7 | 1.4 | 1.6 | 1.3 |
| No | 0.2 | 0.7 | 0.8 | 1.5 | 1.6 | 1.1 | 1.8 | 1.4 | 1.1 | 0.6 |
| Control of school | | | | | | | | | | |
| Public | 0.1 | 0.4 | 0.5 | 1.3 | 1.0 | 1.2 | 1.3 | 1.2 | 1.0 | 0.8 |
| Private | — | 0.3 | 0.3 | 6.2 | 3.4 | 4.0 | 6.5 | 3.7 | 5.4 | 4.9 |

— Not applicable.

SOURCE: U.S. Department of Education, NCES. 1998 National Assessment of Educational Progress (NEAP) High School Transcript Studies.

**Table S39-2** Standard errors for the percentage distribution of high school graduates according to various levels of science courses taken, by student and school characteristics: 1998

| Student and school characteristic | No science | Primary physical science | Secondary physical science | Biology | Chemistry I or Physics I | Chemistry I and Physics Ior | Chemistry II Physics II |
|---|---|---|---|---|---|---|---|
| Total | 0.1 | 0.5 | 0.7 | 1.2 | 1.3 | 1.1 | 0.7 |
| Sex | | | | | | | |
| Male | 0.1 | 0.7 | 0.8 | 1.4 | 1.5 | 1.7 | 0.8 |
| Female | 0.1 | 0.4 | 0.6 | 1.3 | 1.3 | 1.1 | 0.7 |
| Race-ethnicity | | | | | | | |
| White | 0.1 | 0.6 | 0.6 | 1.4 | 1.4 | 1.2 | 0.8 |
| Black | 0.2 | 0.3 | 1.4 | 1.9 | 1.7 | 1.7 | 0.9 |
| Hispanic | 0.2 | 1.7 | 1.9 | 1.5 | 2.7 | 1.7 | 1.3 |
| Asian/Pacific Islander | (*) | 0.9 | 1.1 | 2.2 | 3.3 | 4.8 | 2.2 |
| American Indian/ Alaskan Native | — | 1.4 | 2.2 | 5.3 | 3.7 | 3.9 | 1.3 |
| Met core New Basics | | | | | | | |
| Yes | 0.1 | 0.2 | 0.4 | 1.8 | 1.8 | 1.9 | 1.0 |
| No | 0.2 | 1.1 | 1.2 | 1.4 | 1.3 | 0.9 | 0.6 |
| Control of school | | | | | | | |
| Public | 0.1 | 0.6 | 0.7 | 1.1 | 1.2 | 0.9 | 0.7 |
| Private | — | 0.2 | 0.9 | 5.6 | 6.2 | 8.2 | 2.8 |

— Not applicable.

* Percentage less than 0.05.

SOURCE: U.S. Department of Education, NCES. 1998 National Assessment of Educational Progress (NEAP) High School Transcript Study.

## Coursetaking in Mathematics and Science

Table S40-1 Standard errors for the percentage of high school graduates who took various levels of advanced mathematics and science courses: Selected years 1982–98

| | Mathematics | | | | | Science | | |
|---|---|---|---|---|---|---|---|---|
| | Middle academic | | Advanced academic | | | | | |
| Year | Level I | Level II | Level I | Level II | Level III | Chemistry I or Physics I | Chemistry I and Physics I | Chemistry II or Physics II |
| 1982 | 0.8 | 0.6 | 0.6 | 0.4 | 0.5 | 0.6 | 0.5 | 0.4 |
| 1987 | 0.9 | 0.9 | 1.2 | 0.5 | 0.6 | 0.9 | 0.9 | 0.5 |
| 1990 | 0.7 | 0.8 | 0.9 | 0.7 | 0.5 | 0.9 | 0.7 | 0.6 |
| 1992 | 0.8 | 0.9 | 0.8 | 0.6 | 0.8 | 1.0 | 0.8 | 0.4 |
| 1994 | 0.8 | 0.8 | 1.0 | 0.7 | 0.6 | 0.9 | 0.8 | 0.6 |
| 1998 | 1.0 | 1.1 | 1.2 | 1.1 | 0.9 | 1.3 | 1.1 | 0.6 |

SOURCE: U.S. Department of Education, NCES. High School and Beyond Longitudinal Study of 1980 Sophmores, "Second Follow-up" (HS&B 1980/1984); National Education Longitudinal Study of 1988 Eighth Graders, "High School Transcript Study" (NELS:1992); and 1982, 1987, 1990, 1992, 1994, 1998 National Assessment of Educational Progress (NAEP) High School Transcript Studies.

## Class Size of Kindergartens

Table S41-1 Standard errors for the average size of kindergarten classrooms and percentage distribution, by class size and selected characteristics: Fall 1998

| | | Class size | |
|---|---|---|---|
| Characteristic | Average class size | 15 or fewer students | More than 15 students |
| **Total** | **0.3** | **1.8** | **1.8** |
| Program type | | | |
| Full-day | 0.2 | 1.8 | 1.8 |
| Part-day | 0.6 | 3.4 | 3.4 |
| Control of school | | | |
| Public | 0.3 | 1.9 | 1.9 |
| Private | 0.7 | 3.8 | 3.8 |
| Percent minority | | | |
| Less than 10 | 0.5 | 3.4 | 3.4 |
| 10–24 | 0.4 | 2.7 | 2.7 |
| 25–49 | 0.3 | 2.2 | 2.2 |
| 50–75 | 0.9 | 5.2 | 5.2 |
| More than 75 | 0.6 | 3.4 | 3.4 |

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study," Kindergarten Class of 1998–99," Fall 1998.

## Interest Areas and Centers in Kindergarten Classrooms

**Table S42-1** **Standard errors for the percentage of kindergarten classrooms with interest areas or centers, by selected characteristics: Fall 1998**

| Characteristic | Interest area or center | | | | |
|---|---|---|---|---|---|
| | Reading | Play | Mathematics | Writing | Science |
| **Total** | **0.2** | **0.3** | **0.7** | **0.8** | **1.0** |
| Program type | | | | | |
| Full-day | 0.3 | 0.4 | 0.9 | 0.9 | 1.2 |
| Part-day | 0.3 | 0.6 | 1.2 | 2.1 | 2.9 |
| Control of school | | | | | |
| Public | 0.1 | 0.2 | 0.4 | 3.2 | 1.0 |
| Private | 1.0 | 1.6 | 3.0 | 0.8 | 3.4 |
| Percent minority | | | | | |
| Less than 10 | 0.3 | 0.5 | 1.1 | 1.7 | 1.9 |
| 10–24 | 0.0 | 0.0 | 2.5 | 2.1 | 2.8 |
| 25–49 | 0.9 | 0.4 | 0.7 | 1.9 | 2.3 |
| 50–75 | 0.8 | 2.5 | 3.9 | 4.2 | 2.9 |
| More than 75 | 0.3 | 0.5 | 0.6 | 1.3 | 2.4 |

SOURCE: U.S. Department of Education, NCES. Early Childhood Longitudinal Study," Kindergarten Class of 1998–99," Fall 1998.

## Instructional Environments in 8th-Grade Mathematics

**Table S44-1** **Standard errors for the percentage distribution of 8th-grade mathematics lessons containing task-controlled tasks, a combination of task- and solver-controlled tasks, or solver-controlled tasks, by country: 1994–95**

| Locus of control | Country | | |
|---|---|---|---|
| | United States | Germany | Japan |
| All task-controlled | 7.8 | 11.0 | 9.1 |
| Combination of task- and solver-controlled | 6.1 | 9.1 | 14.1 |
| All solver-controlled | 4.7 | 6.0 | 15.3 |

SOURCE: U.S. Department of Education, NCES. *The TIMSS Videotape Classroom Study: Methods and Findings from an Exploratory Research Project on Eighth-Grade Mathematics Instruction in Germany, Japan, and the United States* (NCES 1999–074), 1999.

**Table S44-2** **Standard errors for the percentage distribution of teachers responding to the question, "What was the main thing you wanted students to learn from today's lesson?," by country and response: 1994–95**

| Questionnaire response | Country | | |
|---|---|---|---|
| | United States | Germany | Japan |
| Mathematical skills | 8.1 | 7.9 | 6.2 |
| Mathematical thinking | 5.8 | 6.3 | 6.5 |
| Social/motivational | 3.9 | 1.8 | — |
| Test preparation | 2.6 | — | — |
| Indeterminable | 3.4 | 3.2 | 1.8 |

— Standard error not available because no teachers reported these goals.

SOURCE: U.S. Department of Education, NCES. *The TIMSS Videotape Classroom Study: Methods and Findings from an Exploratory Research Project on Eighth-Grade Mathematics Instruction in Germany, Japan, and the United States* (NCES 1999–074), 1999.

# Students' Use of the Internet

**Table S45-1** **Standard errors for the percentage of students in grades 1–12 who had potential access to a computer and used the Internet for various purposes at various locations, by race-ethnicity and family income: 1998**

| Accessibility, location of use, and reason for use at home | Total | Race-ethnicity | | | Family income | | |
|---|---|---|---|---|---|---|---|
| | | White | Black | Hispanic | Low | Middle | High |
| **Students who had potential access to** | | | | | | | |
| Computer in household | 0.5 | 0.6 | 1.4 | 1.5 | 1.7 | 1.0 | 1.0 |
| WebTV in household | 0.1 | 0.2 | 0.3 | 0.3 | 0.2 | 0.2 | 0.4 |
| Anyone from household use Internet from home | 0.5 | 0.7 | 0.9 | 1.2 | 1.1 | 0.9 | 1.5 |
| **Students who used the Internet** | | | | | | | |
| At school | 0.5 | 0.5 | 1.4 | 1.6 | 1.9 | 0.9 | 1.1 |
| At home | 0.5 | 0.6 | 0.8 | 0.9 | 0.9 | 0.8 | 1.6 |
| Outside the home | 0.4 | 0.6 | 1.0 | 1.2 | 1.5 | 0.8 | 1.3 |
| At public library | 0.2 | 0.2 | 0.4 | 0.5 | 0.6 | 0.3 | 0.5 |
| At community center | (*) | (*) | — | 0.1 | 0.2 | 0.1 | 0.1 |
| At someone else's computer | 0.2 | 0.3 | 0.3 | 0.5 | 0.7 | 0.4 | 0.5 |
| **Purpose of Internet use at home is** | | | | | | | |
| E-mail | 0.4 | 0.5 | 0.6 | 0.7 | 0.7 | 0.7 | 1.4 |
| Contacting friends/family | 0.4 | 0.5 | 0.5 | 0.7 | 0.7 | 0.6 | 1.4 |
| Educational purposes | 0.3 | 0.4 | 0.3 | 0.5 | 0.4 | 0.4 | 1.0 |
| Hobbies | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.9 |
| Educational courses/research for school | 0.4 | 0.6 | 0.7 | 0.8 | 0.8 | 0.7 | 1.5 |
| News, weather, sports | 0.2 | 0.3 | 0.4 | 0.5 | 0.4 | 0.4 | 1.0 |
| Search for information | 1.1 | 1.3 | 3.0 | 3.4 | 0.6 | 0.5 | 1.2 |
| Games, entertainment, fun | 0.2 | 0.2 | 0.1 | 0.2 | 0.3 | 0.3 | 0.6 |

— Not applicable.

* Value less than 0.05.

SOURCE: U.S. Department of Commerce, Bureau of the Census. December and October Current Population Surveys, 1998.

**Table S45-2** **Standard errors for the percentage of students in grades 1–12 who named various reasons for Internet use as the most important: 1998**

| Reasons for Internet use | First most important use | Second most important use | Third most important use |
|---|---|---|---|
| E-mail | 1.1 | 0.4 | 0.4 |
| Educational courses/research for school | 1.1 | 1.1 | 0.5 |
| News, weather, sports | 0.3 | 0.7 | 0.9 |
| Phone calls | 0.1 | 0.2 | 0.4 |
| Search for information | 0.4 | 0.9 | 1.1 |
| Search for jobs | 0.1 | 0.1 | 0.3 |
| Job-related tasks | (*) | 0.1 | 0.2 |
| Shop, pay bills, or other commercial activities | 0.1 | 0.2 | 0.3 |
| Other | 0.4 | 0.4 | 0.6 |
| Games, entertainment, fun | 0.3 | 0.4 | 0.5 |

* Value less than 0.05.

SOURCE: U.S. Department of Commerce, Bureau of the Census. December and October Current Population Surveys, 1998.

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# School Choice and Parental Satisfaction

**Table S46-1** **Standard errors for the percentage distribution of students in grades 3–12 who attended a chosen or assigned school, by child's race-ethnicity, parents' highest education level, and household income: 1993, 1996, and 1999**

| Child's race-ethnicity, parents' highest education level, and household income | 1993* | | | 1996 | | | 1999 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Public | | | Public | | | Public | | |
| | Assigned | Chosen | Private | Assigned | Chosen | Private | Assigned | Chosen | Private |
| **Total** | **0.4** | **0.4** | **0.3** | **0.5** | **0.4** | **0.3** | **0.5** | **0.4** | **0.3** |
| Race-ethnicity | | | | | | | | | |
| White | 0.6 | 0.5 | 0.4 | 0.6 | 0.5 | 0.5 | 0.6 | 0.4 | 0.4 |
| Black | 1.1 | 1.0 | 0.4 | 1.4 | 1.4 | 0.6 | 1.4 | 1.4 | 0.6 |
| Hispanic | 1.2 | 1.1 | 0.6 | 1.3 | 1.1 | 0.8 | 1.2 | 1.1 | 0.6 |
| Other | 3.1 | 3.5 | 1.7 | 1.9 | 1.9 | 1.2 | 2.2 | 2.0 | 1.3 |
| Parents' highest education level | | | | | | | | | |
| Less than high school diploma | 1.3 | 1.3 | 0.5 | 1.8 | 1.6 | 0.8 | 1.8 | 1.9 | 0.6 |
| High school diploma or GED | 0.8 | 0.7 | 0.4 | 0.9 | 0.7 | 0.4 | 1.0 | 0.8 | 0.5 |
| Some college/ technical/ vocational school | 0.9 | 0.8 | 0.5 | 0.9 | 0.8 | 0.6 | 0.9 | 0.8 | 0.5 |
| Bachelor's degree | 1.6 | 0.8 | 1.2 | 1.4 | 1.2 | 1.0 | 1.1 | 0.9 | 0.9 |
| Graduate/advanced degree | 1.1 | 0.7 | 0.9 | 1.4 | 0.9 | 1.3 | 1.1 | 0.7 | 1.0 |
| Household income | | | | | | | | | |
| $10,000 or less | 1.4 | 1.1 | 0.6 | 1.8 | 1.6 | 0.7 | 2.0 | 2.0 | 0.8 |
| 10,001–20,000 | 2.0 | 2.0 | 0.5 | 1.3 | 1.1 | 0.7 | 1.3 | 1.2 | 0.8 |
| 20,001–35,000 | 0.7 | 0.7 | 0.7 | 1.0 | 0.9 | 0.6 | 0.9 | 0.8 | 0.5 |
| 35,001–50,000 | 1.2 | 0.7 | 0.8 | 0.9 | 0.8 | 0.7 | 1.0 | 0.8 | 0.7 |
| 50,001 or more | 0.8 | 0.5 | 0.7 | 0.8 | 0.5 | 0.7 | 0.8 | 0.5 | 0.6 |

* Data are revised from previously published figures

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1993 (School Safety and Discipline Component), 1996 (Parent Interview Component), and 1999 (Parent Interview Component).

# School Choice and Parental Satisfaction

**Table S46-2** **Standard errors for the percentage of students in grades 3–12 with parents who were very satisfied with aspects of their child's school, by school choice type, grade level, and race-ethnicity: 1993 and 1999**

| School, grade level, and race-ethnicity | School | | Teacher | | Academic standards | | Discipline | |
|---|---|---|---|---|---|---|---|---|
| | 1993 | 1999 | 1993 | 1999 | 1993 | 1999 | 1993 | 1999 |
| **Total** | **0.7** | **0.6** | **0.7** | **0.5** | **0.6** | **0.6** | **0.7** | **0.6** |
| | | | | Public-Assigned | | | | |
| **Total** | 0.7 | 0.7 | 0.8 | 0.6 | 0.6 | 0.8 | 0.8 | 0.7 |
| Grade level | | | | | | | | |
| Grades 3–5 | 1.3 | 1.0 | 1.1 | 1.1 | 1.4 | 1.2 | 1.4 | 1.1 |
| Grades 6–8 | 0.9 | 1.2 | 0.8 | 1.2 | 1.0 | 1.2 | 1.0 | 1.1 |
| Grades 9–12 | 1.6 | 1.1 | 1.9 | 1.1 | 1.0 | 1.2 | 1.6 | 1.1 |
| Race-ethnicity | | | | | | | | |
| White | 0.7 | 0.9 | 0.8 | 0.8 | 0.7 | 1.0 | 0.7 | 1.0 |
| Black | 1.7 | 1.9 | 1.8 | 1.8 | 1.9 | 1.7 | 1.9 | 1.7 |
| Hispanic | 2.1 | 1.4 | 2.0 | 1.5 | 1.7 | 1.5 | 2.3 | 1.5 |
| Other | 3.2 | 2.8 | 3.1 | 2.7 | 3.7 | 3.0 | 3.7 | 3.0 |
| | | | | Public-Chosen | | | | |
| **Total** | 2.6 | 1.2 | 1.8 | 1.1 | 3.0 | 1.2 | 1.6 | 1.4 |
| Grade level | | | | | | | | |
| Grades 3–5 | 2.9 | 2.8 | 3.0 | 2.2 | 2.9 | 2.3 | 2.9 | 2.4 |
| Grades 6–8 | 7.0 | 2.7 | 3.5 | 2.8 | 8.0 | 2.7 | 3.1 | 2.5 |
| Grades 9–12 | 2.4 | 2.2 | 2.4 | 2.0 | 2.4 | 2.1 | 2.2 | 2.3 |
| Race-ethnicity | | | | | | | | |
| White | 3.5 | 1.9 | 3.4 | 2.0 | 3.8 | 2.0 | 2.5 | 2.0 |
| Black | 3.0 | 2.9 | 3.0 | 2.8 | 2.7 | 2.9 | 2.9 | 3.0 |
| Hispanic | 4.0 | 2.9 | 4.0 | 2.8 | 3.5 | 2.8 | 3.7 | 2.9 |
| Other | 14.7 | 6.9 | 12.3 | 6.7 | 12.6 | 7.3 | 13.9 | 6.8 |
| | | | | Private | | | | |
| **Total** | 1.3 | 1.3 | 1.3 | 1.6 | 1.3 | 1.4 | 1.1 | 1.2 |
| Grade level | | | | | | | | |
| Grades 3–5 | 2.7 | 2.2 | 2.8 | 2.1 | 2.7 | 2.3 | 2.0 | 1.7 |
| Grades 6–8 | 1.6 | 2.5 | 1.8 | 2.9 | 1.7 | 2.4 | 1.5 | 2.2 |
| Grades 9–12 | 2.2 | 2.3 | 2.2 | 2.7 | 2.1 | 2.3 | 2.1 | 2.1 |
| Race-ethnicity | | | | | | | | |
| White | 1.5 | 1.4 | 1.6 | 1.7 | 1.5 | 1.5 | 1.2 | 1.4 |
| Black | 4.5 | 5.6 | 5.1 | 5.1 | 3.9 | 4.1 | 3.5 | 5.4 |
| Hispanic | 4.6 | 4.4 | 4.0 | 4.4 | 4.3 | 4.1 | 3.0 | 3.8 |
| Other | 2.9 | 7.8 | 7.7 | 8.1 | 3.6 | 8.5 | 3.5 | 6.1 |

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1993 (School Safety and Discipline Component), and 1999 (Parent Interview Component).

# Preparation and Qualifications of Public School Teachers

**Table S47-1 Standard errors for the percentage of full-time public school teachers who held various degrees and certificates, by teacher and school characteristics: 1998**

| Teacher or school characteristic | Degrees and certificates<br>Bachelor's degree | Master's degree | Doctor's degree | Other degree | Other certificate |
|---|---|---|---|---|---|
| **Total** | (*) | **1.1** | **0.2** | **0.2** | **0.3** |
| Years of teaching experience | | | | | |
| 3 or fewer years | 0.1 | 1.6 | 0.3 | 0.5 | 0.8 |
| 4–9 years | — | 2.3 | 0.1 | 0.4 | 0.6 |
| 10–19 years | — | 1.8 | 0.3 | 0.3 | 0.9 |
| 20 or more years | — | 1.5 | 0.4 | 0.3 | 0.7 |
| School instructional level | | | | | |
| Elementary school | — | 1.8 | 0.2 | 0.3 | 0.6 |
| Middle school | 0.1 | 1.9 | 0.2 | 0.5 | 0.7 |
| High school | — | 1.5 | 0.5 | 0.3 | 0.7 |
| Combined | — | 3.7 | 1.6 | 0.2 | 1.8 |
| School enrollment size | | | | | |
| Less than 300 | — | 2.6 | — | 0.5 | 1.8 |
| 300–499 | — | 2.1 | 0.5 | 0.3 | 1.0 |
| 500–999 | — | 1.9 | 0.3 | 0.3 | 0.6 |
| 1,000 or more | 0.1 | 1.7 | 0.4 | 0.3 | 0.7 |
| Region | | | | | |
| Northeast | 0.1 | 2.8 | 0.8 | 0.3 | 1.2 |
| Midwest | — | 2.0 | 0.2 | 0.4 | 0.7 |
| South | (*) | 1.6 | 0.3 | 0.3 | 0.7 |
| West | — | 2.0 | 0.3 | 0.3 | 0.9 |
| Percent minority enrollment | | | | | |
| 5 percent or less | — | 1.9 | 0.2 | 0.6 | 0.8 |
| 6–20 percent | — | 2.1 | 0.5 | 0.3 | 0.7 |
| 21–50 percent | — | 2.1 | 0.4 | 0.4 | 0.7 |
| More than 50 percent | 0.1 | 2.2 | 0.3 | 0.4 | 0.9 |
| Percent of students eligible for free or reduced-price lunch | | | | | |
| Less than 15 percent | — | 1.8 | 0.6 | 0.3 | 0.7 |
| 15–32 percent | — | 2.0 | 0.3 | 0.3 | 0.8 |
| 33–59 percent | 0.1 | 2.4 | 0.3 | 0.4 | 0.6 |
| 60 percent or more | — | 2.3 | 0.2 | 0.4 | 1.1 |

— Not applicable

* Percentages less than 0.05

SOURCE: U.S. Department of Education, NCES. *Teacher Quality: A Report on the Preparation and Qualifications of Public School Teachers* (NCES 1999–080), 1999

# Preparation and Qualifications of Public School Teachers

**Table S47-2 Standard errors for the percentage distribution of full-time public school teachers according to undergraduate or graduate majors in various fields of study, by teacher and school characteristics: 1998**

| | Major field of study | | | |
|---|---|---|---|---|
| Teacher or school characteristic | Academic field | Subject area education | General education | Other education |
| **Total** | 0.9 | 0.7 | 0.8 | 0.5 |
| Years of teaching experience | | | | |
| 3 or fewer years | 2.1 | 0.8 | 2.1 | 0.8 |
| 4–9 years | 2.0 | 1.5 | 2.3 | 0.8 |
| 10–19 years | 1.5 | 1.5 | 1.7 | 1.0 |
| 20 or more years | 1.6 | 1.1 | 1.5 | 1.1 |
| School instructional level | | | | |
| Elementary school | 1.5 | 1.1 | 1.3 | 0.9 |
| Middle school | 2.2 | 1.5 | 1.7 | 0.8 |
| High school | 1.2 | 1.3 | 0.7 | 0.2 |
| Combined | 3.4 | 3.3 | 1.9 | 1.5 |

SOURCE: U.S. Department of Education, NCES. *Teacher Quality: A Report on the Preparation and Qualifications of Public School Teachers* (NCES 1999–080), 1999.

# Preparations and Qualifications of Public School Teachers

**Table S47-3** Standard errors for the percentage distribution of full-time public school teachers, by various types of teaching certificates in their state and by teacher and school characteristics: 1998

| | Teachers in general elementary classrooms | | | | | Teachers in departmentalized settings | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Type of certificate | | | | | Type of certificate | | | | |
| Teacher or school characteristic | Regular or standard state certificate or advanced professional certificate | Provisional[3] | Probationary | Temporary | Emergency or waiver | Regular or standard state certificate or advanced professional certificate | Provisional[3] | Probationary | Temporary | Emergency or waiver |
| **Total** | **0.7** | **0.4** | **0.3** | **0.3** | **0.2** | **0.5** | **0.3** | **0.3** | **0.2** | **0.2** |
| Years of teaching experience | | | | | | | | | | |
| 3 or fewer years | 3.1 | 2.1 | 2.1 | 1.9 | 1.5 | 2.3 | 1.5 | 1.5 | 1.2 | 1.4 |
| 4–9 years | 1.6 | 1.4 | 0.4 | 0.7 | 0.3 | 1.5 | 1.0 | 0.8 | 0.6 | 0.3 |
| 10–19 years | 0.6 | 0.6 | 0.2 | 0.2 | — | 0.7 | 0.5 | 0.2 | 0.2 | 0.2 |
| 20 or more years | 0.5 | 0.5 | — | — | — | 0.4 | 0.4 | 0.1 | — | — |
| School enrollment size | | | | | | | | | | |
| Less than 300 | 1.1 | 0.6 | 0.5 | 0.6 | 0.2 | 1.7 | 1.1 | 0.8 | — | 0.5 |
| 300–499 | 1.1 | 0.9 | 0.4 | 0.5 | 0.2 | 2.2 | 1.4 | 1.5 | 0.5 | 0.5 |
| 500–999 | 1.0 | 0.6 | 0.6 | 0.5 | 0.4 | 0.7 | 0.5 | 0.3 | 0.2 | 0.4 |
| 1,000 or more | 2.9 | 1.5 | 2.3 | 1.9 | 1.3 | 0.9 | 0.6 | 0.5 | 0.5 | 0.3 |
| Region | | | | | | | | | | |
| Northeast | 1.8 | 1.7 | 0.6 | 0.8 | — | 1.0 | 0.9 | 0.7 | 0.5 | — |
| Midwest | 1.1 | 1.1 | 0.3 | 0.4 | — | 1.5 | 0.8 | 0.8 | 0.3 | — |
| South | 1.0 | 0.7 | 0.6 | 0.5 | 0.3 | 0.7 | 0.6 | 0.4 | 0.3 | 0.3 |
| West | 1.4 | 0.8 | 0.8 | 0.7 | 0.8 | 1.4 | 0.4 | 0.8 | 0.7 | 1.1 |
| Percent minority enrollment | | | | | | | | | | |
| 5 percent or less | 0.8 | 0.7 | 0.4 | 0.5 | — | 1.4 | 0.7 | 0.8 | 0.3 | 0.1 |
| 6–20 percent | 1.1 | 0.7 | 0.5 | 0.5 | 0.1 | 0.9 | 0.6 | 0.5 | 0.3 | 0.2 |
| 21–50 percent | 1.6 | 1.0 | 0.8 | 0.5 | 0.4 | 1.0 | 0.7 | 0.6 | 0.4 | 0.3 |
| More than 50 percent | 1.7 | 1.1 | 0.7 | 0.7 | 0.8 | 1.2 | 0.8 | 0.6 | 0.7 | 0.8 |
| Percent of students eligible for free or reduced-price lunch | | | | | | | | | | |
| Less than 15 percent | 1.3 | 1.0 | 0.6 | 0.8 | 0.3 | 1.2 | 0.6 | 0.7 | 0.4 | 0.2 |
| 15–32 percent | 1.5 | 1.1 | 0.5 | 0.6 | — | 1.0 | 0.6 | 0.5 | 0.5 | 0.2 |
| 33–59 percent | 0.9 | 0.7 | 0.5 | 0.3 | 0.3 | 1.0 | 0.7 | 0.4 | 0.3 | 0.2 |
| 60 percent or more | 1.3 | 0.9 | 0.7 | 0.5 | 0.7 | 1.5 | 0.9 | 0.7 | 0.6 | 1.1 |

— Not applicable.

SOURCE: U.S. Department of Education, NCES. *Teacher Quality: A Report on the Preparation and Qualifications of Public School Teachers* (NCES 1999–080), 1999.

# Perceived Impact of Professional Development

**Table S48-1 Standard errors for the percentage of full-time public school teachers who participated in the past 12 months in professional development activities that focused on various topics, by number of hours spent in development activity: 1998**

| | Any participation | | | |
|---|---|---|---|---|
| | | Total hours spent | | |
| Focus of activity | Total | 1 to 8 | 9 to 32 | More than 32 |
| In-depth study in the subject area of your main teaching assignment | 0.8 | 0.7 | 0.7 | 0.5 |
| New methods of teaching (e.g., cooperative learning) | 0.7 | 1.0 | 0.8 | 0.5 |
| State or district curriculum and performance standards | 0.8 | 1.1 | 0.8 | 0.4 |
| Integration of educational technology in the grade or subject you teach | 0.8 | 1.0 | 0.8 | 0.5 |
| Student performance assessment | 0.9 | 1.0 | 0.7 | 0.4 |
| Classroom management, including student discipline | 0.9 | 0.9 | 0.4 | 0.4 |
| Addressing the needs of students with limited English proficiency or from diverse cultural backgrounds | 1.1 | 0.8 | 0.4 | 0.4 |
| Addressing the needs of students with disabilities | 1.1 | 0.9 | 0.4 | 0.3 |

SOURCE: U.S. Department of Education, NCES. *Teacher Quality: A Report on the Preparation and Qualifications of Public School Teachers* (NCES 1999–080), 1999.

# Age of School Buildings

**Table S49-1** Standard errors for the mean age and percentage distribution of public schools according to year of school construction and condition of school, by selected school characteristics: 1994–96

| School characteristic | Mean age | Year school was constructed: Before 1950 | 1950–69 | 1970–84 | 1985 or after | Condition of school: Oldest | Moderate | Newest |
|---|---|---|---|---|---|---|---|---|
| **Total** | **0.6** | **1.0** | **1.1** | **0.8** | **0.7** | **1.6** | **1.6** | **1.1** |
| Instructional level | | | | | | | | |
| Elementary | 0.7 | 1.3 | 1.3 | 0.9 | 0.9 | 2.0 | 2.0 | 1.4 |
| Secondary | 0.5 | 1.1 | 2.0 | 1.4 | 1.0 | 2.3 | 2.5 | 1.3 |
| Enrollment size | | | | | | | | |
| Less than 300 | 1.1 | 2.3 | 2.1 | 1.4 | 1.2 | 3.3 | 3.3 | 1.6 |
| 300–999 | 0.6 | 1.1 | 1.4 | 0.9 | 0.9 | 2.0 | 2.0 | 1.4 |
| 1,000 or more | 0.9 | 1.6 | 2.0 | 2.1 | 1.5 | 3.7 | 4.0 | 2.8 |
| Metropolitan status | | | | | | | | |
| City | 1.0 | 2.1 | 2.1 | 1.3 | 1.2 | 3.8 | 3.6 | 2.2 |
| Urban fringe | 1.0 | 1.9 | 2.0 | 1.3 | 1.3 | 3.7 | 3.4 | 2.2 |
| Town | 1.1 | 2.0 | 2.1 | 1.7 | 1.4 | 2.8 | 3.2 | 1.8 |
| Rural | 0.9 | 1.8 | 1.9 | 1.2 | 1.3 | 3.1 | 3.3 | 2.3 |
| Region | | | | | | | | |
| Northeast | 1.6 | 2.6 | 2.3 | 1.7 | 1.3 | 3.9 | 4.2 | 1.9 |
| Southeast | 0.9 | 1.7 | 2.2 | 2.0 | 1.5 | 3.7 | 3.8 | 2.4 |
| Central | 1.1 | 2.2 | 2.0 | 1.2 | 1.2 | 3.5 | 3.4 | 1.5 |
| West | 0.8 | 1.7 | 1.7 | 1.4 | 1.3 | 2.8 | 2.9 | 2.6 |
| Percentage of students eligible for free or reduced-price lunch | | | | | | | | |
| Less than 20 percent | 0.8 | 1.6 | 1.9 | 1.3 | 1.3 | 3.4 | 3.3 | 2.0 |
| 20–49 percent | 0.9 | 1.3 | 1.6 | 1.3 | 1.4 | 2.9 | 2.6 | 2.1 |
| 50 percent or more | 1.1 | 2.2 | 2.3 | 1.4 | 1.3 | 3.5 | 3.3 | 2.1 |

SOURCE: U.S. Department of Education, NCES. *How Old Are Our Public Schools?* (NCES 1999–048), 1999

**Table S49-2** Standard errors for the percentage distribution of public schools according to year of construction, by year of last major renovation: 1994–96

| Year of last major renovation | Total | Year school was constructed: Before 1950 | 1950–69 | 1970–84 | 1985 or after |
|---|---|---|---|---|---|
| **Total** | — | **1.5** | **2.0** | **1.6** | **1.1** |
| Never | 1.6 | 0.5 | 1.1 | 0.7 | 0.5 |
| Before 1980 | 1.2 | 0.7 | 1.0 | 0.3 | — |
| 1980–89 | 1.4 | 0.9 | 1.0 | 0.6 | 0.3 |
| 1990–95 | 1.5 | 1.0 | 1.4 | 0.7 | 0.5 |

— Not applicable

SOURCE: U.S. Department of Education, NCES. *How Old Are Our Public Schools?* (NCES 1999–048), 1999

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# Undergraduate Remedial Education

**Table S50-1** **Standard errors for percentage of postsecondary education degree-granting institutions offering remedial courses, by type of courses and type of institution: Fall 1995**

| Subject | Public 2-year | Public 4-year | Private 4-year |
|---|---|---|---|
| Reading, writing, or mathematics | — | 2.6 | 3.9 |
| Reading | 0.7 | 3.1 | 2.7 |
| Writing | 0.5 | 2.7 | 4.2 |
| Mathematics | 0.5 | 2.7 | 3.5 |

—Not applicable

SOURCE: U.S. Department of Education, NCES. Postsecondary Education Quick Information System, "Survey on Remedial Education in Higher Education Institutions," 1995.

# Student Satisfaction with Instruction

**Table S51-1** **Standard errors for percentage of beginning postsecondary students who were satisfied with various aspects of instruction at their institution, by type of institution: 1995–96**

| | Private, not-for-profit 4-year | Public 4-year | Public 2-year |
|---|---|---|---|
| Instructors' ability to teach | 0.8 | 1.0 | 1.0 |
| Class size | 0.5 | 0.9 | 0.8 |
| Course availability | 1.3 | 1.2 | 1.2 |

SOURCE: U.S. Department of Education, NCES. National Postsecondary Student Aid Study (NPSAS 1996), Undergraduate Data Analysis System.

# Instructional Faculty and Staff Who Teach Undergraduates

**Table S52-1** **Standard errors for the percentage of full-time instructional faculty and staff in 4-year institutions who taught at least one undergraduate class or who taught only undergraduate classes for credit, by academic rank: Fall 1992**

| | Taught at least one undergraduate class for credit | | | Taught only undergraduate classes for credit | | |
|---|---|---|---|---|---|---|
| Academic rank | All 4-year | 4-year doctoral | 4-year non-doctoral | All 4-year | 4-year doctoral | 4-year non-doctoral |
| **Total** | **0.9** | **1.5** | **0.7** | **0.9** | **1.3** | **1.0** |
| Full professor | 1.4 | 2.1 | 1.0 | 1.4 | 1.7 | 1.4 |
| Associate professor | 1.4 | 2.4 | 1.0 | 1.5 | 2.1 | 1.6 |
| Assistant professor | 1.2 | 2.1 | 1.0 | 1.4 | 2.1 | 1.3 |
| Instructor or lecturer | 1.4 | 2.8 | 1.0 | 1.6 | 3.0 | 1.4 |

SOURCE: U.S. Department of Education, NCES. 1993 National Study of Postsecondary Faculty (NSOPF: 1993).

## Distance Learning in Postsecondary Education

**Table S53-1** **Standard errors for percentage of postsecondary education degree-granting institutions that offered distance education courses, by institution type: Fall 1995 and 1997–98**

|  | Fall 1995 | 1997–98 |
|---|---|---|
| Public 2-year | 1.9 | 2.4 |
| Public 4-year | 2.0 | 1.9 |
| Private 4-year | 1.2 | 1.6 |

SOURCE: U.S. Department of Education, NCES. Postsecondary Education Quick Information System, "Survey on Distance Education Courses Offered by Higher Education Institutions," 1995; and "Survey on Distance Education at Postsecondary Institutions," 1997–98.

## Services for Disabled Postsecondary Students

**Table S54-1** **Standard errors for the percentage of 2-year and 4-year postsecondary education institutions that enrolled students with disabilities that offered selected services or accommodations to students with disabilities, by type of service or accommodation: 1996–97 or 1997–98**

| Selected service or accommodation | Total | Public |  | Private |  |
|---|---|---|---|---|---|
|  |  | 2-year | 4-year | 2-year | 4-year |
| Alternative exam formats or more time | 1.0 | 1.7 | — | 5.2 | 2.1 |
| Tutors to assist with ongoing coursework | 1.3 | 2.2 | 2.3 | 5.5 | 2.9 |
| Readers, notetakers, scribes | 1.4 | 2.4 | 1.8 | 4.7 | 2.7 |
| Registration assistance or priority registration | 1.7 | 2.8 | 1.3 | 5.3 | 2.7 |
| Adaptive equipment/technology | 1.8 | 2.7 | 2.4 | 5.7 | 2.9 |
| Textbooks on tape | 1.7 | 2.6 | 1.8 | 3.1 | 2.7 |

— Estimate of standard error is not derived because it is based on a statistic estimated at 100.0 percent.

SOURCE: U.S. Department of Education, NCES. Postsecondary Education Quick Information System," Survey on Students with Disabilities at Postsecondary Education Institutions," 1998.

## Time Allocation of Full-Time Faculty

**Table S56-1** **Standard errors for the average number of hours worked per week and percentage distribution of time spent on various work activities by full-time instructional faculty, by type of institution and academic rank: Fall 1992**

| Type of institution and academic rank | Average hours worked per week | Percentage of time spent | | | |
|---|---|---|---|---|---|
| | | Teaching | Research | Administration | Other |
| **Total** | **0.2** | **0.5** | **0.4** | **0.2** | **0.2** |
| Type of institution | | | | | |
| Research | 0.4 | 0.7 | 0.8 | 0.5 | 0.6 |
| Doctoral | 0.5 | 1.1 | 0.8 | 0.5 | 0.8 |
| Comprehensive | 0.3 | 0.6 | 0.4 | 0.4 | 0.2 |
| Liberal arts | 0.6 | 0.9 | 0.7 | 0.8 | 0.4 |
| 2-year | 0.4 | 0.6 | 0.2 | 0.5 | 0.4 |
| Academic rank | | | | | |
| Full professor | 0.3 | 0.7 | 0.6 | 0.4 | 0.3 |
| Associate professor | 0.4 | 0.8 | 0.6 | 0.4 | 0.4 |
| Assistant professor | 0.3 | 0.7 | 0.7 | 0.3 | 0.5 |
| Instructor | 0.5 | 0.9 | 0.3 | 0.5 | 0.7 |
| Lecturer | 1.3 | 2.9 | 1.6 | 1.5 | 2.7 |

SOURCE: U.S. Department of Education, NCES. 1993 National Study of Postsecondary Faculty (NSOPF 1993).

## Part-Time Instructional Faculty and Staff

**Table S57-1** **Standard errors for the percentage of postsecondary instructional faculty and staff who were employed part time, by sex and academic rank: Fall 1992**

| Sex and academic rank | Total | Type of institution | | | | | |
|---|---|---|---|---|---|---|---|
| | | Research | Doctoral | Comprehensive | Liberal arts | 2-year | Other |
| **Total** | **0.9** | **2.5** | **2.4** | **2.0** | **2.8** | **1.3** | **3.4** |
| Sex | | | | | | | |
| Male | 1.1 | 2.1 | 2.4 | 2.2 | 3.5 | 1.6 | 3.9 |
| Female | 0.9 | 3.7 | 3.0 | 1.9 | 2.3 | 1.3 | 3.4 |
| Academic rank | | | | | | | |
| Full professor | 1.2 | 2.1 | 3.0 | 2.5 | 3.1 | 2.7 | 4.6 |
| Associate professor | 1.7 | 3.9 | 2.3 | 1.2 | 1.7 | 3.1 | 8.7 |
| Assistant professor | 1.5 | 3.3 | 2.6 | 1.8 | 3.6 | 3.9 | 6.7 |
| Instructor | 1.0 | 5.4 | 3.4 | 1.9 | 3.3 | 1.4 | 5.2 |
| Lecturer | 2.3 | 5.9 | 6.3 | 2.3 | 6.4 | 1.8 | 8.7 |

SOURCE: U.S. Department of Education, NCES. 1993 National Study of Postsecondary Faculty (NSOPF 1993).

# Before and After School Care

**Table S58-1** **Standard errors for percentage of children in grades K–8 who received various types of care before or after school, by selected student characteristics: 1999**

| Student characteristic | Received care from relative | | | Received care from nonrelative | | | Attended center-based program | | | Child cared for self | | | Parental care | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | K–5 | 6–8 | Total | K–5 | 6–8 | Total | K–5 | 6–8 | Total | K–5 | 6–8 | Total | K–5 | 6–8 |
| **Total** | **0.5** | **0.6** | **0.7** | **0.3** | **0.4** | **0.4** | **0.5** | **0.6** | **0.7** | **0.4** | **0.3** | **0.9** | **0.6** | **0.8** | **0.9** |
| Race-ethnicity | | | | | | | | | | | | | | | |
| White | 0.5 | 0.7 | 0.7 | 0.4 | 0.6 | 0.4 | 0.6 | 0.7 | 1.0 | 0.5 | 0.3 | 1.3 | 0.7 | 0.9 | 1.2 |
| Black | 1.5 | 1.6 | 2.1 | 0.8 | 1.1 | 1.1 | 1.8 | 2.1 | 2.3 | 1.0 | 0.9 | 2.0 | 1.8 | 2.0 | 2.5 |
| Hispanic | 1.1 | 1.3 | 2.0 | 0.7 | 0.9 | 0.6 | 0.9 | 1.0 | 1.8 | 0.8 | 0.8 | 1.8 | 1.4 | 1.6 | 2.4 |
| Other | 2.4 | 2.8 | 3.2 | 1.2 | 1.7 | 1.5 | 2.2 | 2.4 | 4.6 | 1.6 | 1.8 | 3.6 | 3.1 | 3.2 | 5.9 |
| Household income | | | | | | | | | | | | | | | |
| $10,000 or less | 2.1 | 2.3 | 2.8 | 1.0 | 1.3 | 1.3 | 1.9 | 2.1 | 2.9 | 1.1 | 1.0 | 2.7 | 2.4 | 2.7 | 3.5 |
| 10,001–20,000 | 1.5 | 1.8 | 2.4 | 0.9 | 1.1 | 0.9 | 1.4 | 1.5 | 2.5 | 1.1 | 1.0 | 2.1 | 1.6 | 2.0 | 2.6 |
| 20,001–35,000 | 1.0 | 1.1 | 1.5 | 0.7 | 0.9 | 0.9 | 0.8 | 1.1 | 1.5 | 0.7 | 0.7 | 1.8 | 1.3 | 1.5 | 2.2 |
| 35,001–50,000 | 1.1 | 1.4 | 1.6 | 0.7 | 0.9 | 0.7 | 0.9 | 1.2 | 1.7 | 0.9 | 0.7 | 2.1 | 1.2 | 1.6 | 1.8 |
| 50,001 or more | 0.6 | 0.8 | 0.9 | 0.5 | 0.7 | 0.4 | 0.7 | 0.8 | 1.1 | 0.6 | 0.5 | 1.4 | 0.9 | 1.0 | 1.6 |
| Parents' highest education level | | | | | | | | | | | | | | | |
| Less than high school | 1.6 | 2.1 | 2.1 | 0.9 | 1.3 | 0.9 | 1.6 | 2.0 | 2.7 | 1.2 | 1.2 | 2.3 | 2.0 | 2.5 | 3.0 |
| High school diploma or GED | 1.1 | 1.2 | 1.6 | 0.5 | 0.8 | 0.6 | 1.0 | 1.2 | 1.5 | 0.8 | 0.7 | 1.8 | 1.4 | 1.5 | 1.9 |
| Some college/vocational/technical | 1.0 | 1.2 | 1.4 | 0.6 | 0.9 | 0.7 | 0.8 | 1.1 | 1.3 | 0.6 | 0.5 | 1.6 | 1.0 | 1.2 | 1.8 |
| Bachelor's degree | 0.9 | 1.0 | 1.8 | 0.8 | 1.0 | 0.8 | 1.0 | 1.2 | 1.5 | 1.0 | 0.7 | 2.6 | 1.2 | 1.4 | 2.5 |
| Graduate/professional degree | 0.8 | 1.1 | 1.0 | 0.8 | 1.0 | 0.6 | 1.1 | 1.3 | 1.8 | 1.0 | 0.8 | 2.0 | 1.4 | 1.8 | 2.1 |
| Poverty status | | | | | | | | | | | | | | | |
| Poor | 1.5 | 1.7 | 2.1 | 0.7 | 0.9 | 0.8 | 1.3 | 1.5 | 1.8 | 0.9 | 0.7 | 1.9 | 1.7 | 1.9 | 2.6 |
| Nonpoor | 0.4 | 0.5 | 0.6 | 0.4 | 0.5 | 0.4 | 0.4 | 0.6 | 0.7 | 0.4 | 0.3 | 1.1 | 0.5 | 0.7 | 1.0 |
| Family structure | | | | | | | | | | | | | | | |
| Two biological/adoptive parents | 0.5 | 0.7 | 0.7 | 0.4 | 0.5 | 0.4 | 0.5 | 0.6 | 1.0 | 0.5 | 0.3 | 1.2 | 0.7 | 0.9 | 1.3 |
| One biological/adoptive parent | 1.2 | 1.2 | 1.8 | 0.7 | 1.0 | 0.7 | 1.0 | 1.3 | 1.2 | 0.8 | 0.6 | 1.6 | 1.3 | 1.5 | 1.8 |
| One biological/adoptive parent and one stepparent | 1.9 | 2.4 | 2.2 | 1.0 | 1.4 | 0.8 | 1.3 | 1.9 | 1.9 | 1.2 | 1.2 | 2.3 | 2.0 | 2.4 | 3.0 |
| Other relatives | 2.7 | 3.4 | 3.7 | 1.1 | 1.2 | 2.2 | 3.5 | 2.7 | 7.9 | 2.3 | 2.2 | 5.6 | 4.1 | 4.9 | 6.3 |
| Step- or foster parents | 7.0 | 8.5 | 9.8 | 1.5 | 2.6 | — | 5.1 | 7.3 | 6.3 | 5.1 | 7.2 | 8.3 | 7.2 | 10.7 | 11.4 |

— Not applicable.

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Parent Interview Component).

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# Parental Involvement in Schools

**Table S59-1** **Standard errors for the percentage of students in grades K–12 whose parents reported involvement in their child's school, by grade and selected characteristics: 1996 and 1999**

| Characteristic | Attended general meeting | | Attended scheduled meeting with teacher | | Attended school event | | Acted as a volunteer or served on a committee | | Indicated involvement in any of the four activities | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1999 | 1996 | 1999 | 1996 | 1999 | 1996 | 1999 | 1996 | 1999 |
| | | | | | Grades K–12 | | | | | |
| **Total** | **0.4** | **0.5** | **0.4** | **0.5** | **0.4** | **0.5** | **0.4** | **0.4** | **0.3** | **0.3** |
| Race-ethnicity | | | | | | | | | | |
| White | 0.6 | 0.6 | 0.5 | 0.5 | 0.6 | 0.6 | 0.5 | 0.5 | 0.3 | 0.3 |
| Black | 1.3 | 1.2 | 1.3 | 1.3 | 1.3 | 1.3 | 1.2 | 1.3 | 1.0 | 1.0 |
| Hispanic | 1.4 | 1.2 | 1.3 | 1.1 | 1.3 | 1.0 | 1.2 | 1.0 | 0.9 | 0.8 |
| Other | 1.9 | 1.9 | 1.8 | 1.8 | 1.8 | 2.2 | 1.9 | 2.0 | 1.3 | 1.4 |
| Household income | | | | | | | | | | |
| $10,000 or less | 1.5 | 1.7 | 1.6 | 2.0 | 1.7 | 1.8 | 1.3 | 1.5 | 1.2 | 1.3 |
| 10,001–20,000 | 1.4 | 1.2 | 1.5 | 1.2 | 1.4 | 1.4 | 1.4 | 1.2 | 0.8 | 0.9 |
| 20,001–35,000 | 1.0 | 1.1 | 1.0 | 1.1 | 1.0 | 1.1 | 0.9 | 1.0 | 0.6 | 0.7 |
| 35,001–50,000 | 0.8 | 0.8 | 0.9 | 1.0 | 0.9 | 1.0 | 1.1 | 1.1 | 0.4 | 0.6 |
| 50,001 or more | 0.5 | 0.5 | 0.6 | 0.6 | 0.7 | 0.7 | 0.9 | 0.7 | 0.3 | 0.3 |
| Parents' highest education level | | | | | | | | | | |
| Less than high school | 2.0 | 1.9 | 1.7 | 1.8 | 2.0 | 1.7 | 1.3 | 1.0 | 1.4 | 1.4 |
| High school diploma/GED | 0.9 | 1.1 | 0.8 | 0.9 | 0.9 | 1.0 | 0.8 | 0.9 | 0.6 | 0.7 |
| Some college/vocational/technical | 0.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.9 | 0.7 | 1.0 | 0.5 | 0.5 |
| Bachelor's degree | 0.8 | 0.8 | 0.9 | 1.0 | 1.0 | 1.0 | 1.3 | 1.2 | 0.4 | 0.4 |
| Graduate/professional school | 0.7 | 0.6 | 1.1 | 1.1 | 0.9 | 0.8 | 1.1 | 1.2 | 0.4 | 0.4 |
| Family structure | | | | | | | | | | |
| Two biological/adoptive parents | 0.5 | 0.5 | 0.5 | 0.5 | 0.6 | 0.5 | 0.6 | 0.6 | 0.3 | 0.3 |
| One biological/adoptive parent | 1.0 | 1.0 | 0.8 | 1.0 | 1.0 | 0.8 | 0.9 | 0.8 | 0.7 | 0.6 |
| One biological/adoptive and one stepparent | 1.4 | 1.5 | 1.4 | 1.4 | 1.4 | 1.5 | 1.3 | 1.4 | 0.8 | 0.8 |
| Other relatives | 2.7 | 3.3 | 3.2 | 3.0 | 2.6 | 2.9 | 2.5 | 2.0 | 2.5 | 2.2 |
| Step- or foster parents | 7.1 | 6.8 | 7.2 | 6.1 | 8.5 | 6.7 | 7.8 | 5.2 | 4.3 | 4.9 |

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# Parental Involvement in Schools

**Table S59-1** Standard errors for the percentage of students in grades K–12 whose parents reported involvement in their child's school, by grade and selected characteristics: 1996 and 1999—Continued

| Characteristic | Attended general meeting 1996 | Attended general meeting 1999 | Attended scheduled meeting with teacher 1996 | Attended scheduled meeting with teacher 1999 | Attended school event 1996 | Attended school event 1999 | Acted as a volunteer or served on a committee 1996 | Acted as a volunteer or served on a committee 1999 | Indicated involvement in any of the four activities 1996 | Indicated involvement in any of the four activities 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Grades K–5 | | | | | |
| **Total** | **0.6** | **0.5** | **0.5** | **0.5** | **0.6** | **0.7** | **0.6** | **0.6** | **0.3** | **0.3** |
| Race-ethnicity | | | | | | | | | | |
| White | 0.8 | 0.6 | 0.6 | 0.5 | 0.7 | 0.9 | 0.7 | 0.7 | 0.3 | 0.2 |
| Black | 1.7 | 1.4 | 1.7 | 1.4 | 1.9 | 1.8 | 1.7 | 1.8 | 1.2 | 1.1 |
| Hispanic | 1.7 | 1.3 | 1.3 | 1.1 | 2.1 | 1.6 | 1.6 | 1.4 | 1.0 | 0.8 |
| Other | 2.5 | 2.3 | 1.8 | 2.1 | 2.8 | 3.0 | 3.0 | 3.3 | 0.9 | 1.1 |
| Household income | | | | | | | | | | |
| $10,000 or less | 2.0 | 2.1 | 1.8 | 2.1 | 2.4 | 2.3 | 1.9 | 1.9 | 1.4 | 1.3 |
| 10,001–20,000 | 1.9 | 1.7 | 1.6 | 1.5 | 1.8 | 1.8 | 1.8 | 1.8 | 0.9 | 0.8 |
| 20,001–35,000 | 1.1 | 1.2 | 1.1 | 1.1 | 1.3 | 1.5 | 1.5 | 1.2 | 0.7 | 0.7 |
| 35,001–50,000 | 1.0 | 0.9 | 0.9 | 0.9 | 1.3 | 1.3 | 1.5 | 1.5 | 0.4 | 0.5 |
| 50,001 or more | 0.6 | 0.5 | 0.6 | 0.5 | 1.0 | 1.1 | 1.2 | 0.9 | 0.2 | 0.1 |
| Parents' highest education level | | | | | | | | | | |
| Less than high school | 2.7 | 2.3 | 2.2 | 2.1 | 2.9 | 2.6 | 2.0 | 1.7 | 1.6 | 1.5 |
| High school diploma/GED | 1.0 | 1.2 | 1.1 | 1.0 | 1.0 | 1.4 | 1.1 | 1.3 | 0.5 | 0.7 |
| Some college/vocational/technical | 1.0 | 0.8 | 0.8 | 0.7 | 1.0 | 1.3 | 1.1 | 1.4 | 0.6 | 0.3 |
| Bachelor's degree | 0.9 | 0.9 | 0.9 | 0.7 | 1.4 | 1.3 | 1.7 | 1.6 | 0.4 | 0.2 |
| Graduate/professional school | 0.9 | 0.8 | 0.7 | 0.8 | 1.4 | 1.3 | 1.4 | 1.7 | 0.3 | 0.3 |
| Family structure | | | | | | | | | | |
| Two biological/adoptive parents | 0.5 | 0.5 | 0.5 | 0.4 | 0.7 | 0.8 | 0.7 | 0.8 | 0.2 | 0.2 |
| One biological/adoptive parent | 1.3 | 1.1 | 1.0 | 1.0 | 1.4 | 1.1 | 1.3 | 1.1 | 0.7 | 0.7 |
| One biological/adoptive and one stepparent | 2.3 | 2.1 | 1.6 | 1.8 | 2.3 | 2.4 | 2.3 | 2.1 | 1.2 | 1.0 |
| Other relatives | 4.4 | 3.9 | 5.2 | 3.9 | 4.9 | 5.2 | 4.0 | 3.8 | 3.9 | 2.2 |
| Step- or foster parents | 10.5 | 8.8 | 8.4 | 10.5 | 10.9 | 11.6 | 9.0 | 8.7 | 2.4 | 2.2 |

# Parental Involvement in Schools

**Table S59-1** **Standard errors for the percentage of students in grades K–12 whose parents reported involvement in their child's school, by grade and selected characteristics: 1996 and 1999—Continued**

| Characteristic | Attended general meeting | | Attended scheduled meeting with teacher | | Attended school event | | Acted as a volunteer or served on a committee | | Indicated involvement in any of the four activities | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1999 | 1996 | 1999 | 1996 | 1999 | 1996 | 1999 | 1996 | 1999 |
| | | | | | Grades 6–8 | | | | | |
| **Total** | **0.8** | **0.9** | **0.9** | **1.0** | **0.9** | **0.8** | **0.9** | **0.9** | **0.5** | **0.5** |
| Race-ethnicity | | | | | | | | | | |
| White | 0.9 | 1.0 | 1.1 | 1.1 | 1.1 | 1.0 | 1.1 | 1.2 | 0.6 | 0.6 |
| Black | 2.4 | 2.2 | 2.4 | 2.2 | 2.7 | 2.6 | 2.2 | 2.2 | 2.0 | 2.1 |
| Hispanic | 2.2 | 2.3 | 2.6 | 2.1 | 2.6 | 2.5 | 2.1 | 2.0 | 1.8 | 1.7 |
| Other | 4.5 | 3.0 | 4.2 | 3.1 | 4.0 | 4.6 | 3.2 | 3.7 | 3.6 | 1.6 |
| Household income | | | | | | | | | | |
| $10,000 or less | 3.0 | 3.4 | 2.5 | 3.6 | 3.3 | 3.7 | 2.0 | 2.5 | 2.4 | 3.0 |
| 10,001–20,000 | 3.0 | 2.8 | 2.5 | 2.5 | 2.7 | 3.0 | 2.3 | 2.4 | 2.0 | 2.0 |
| 20,001–35,000 | 1.9 | 1.8 | 2.1 | 2.0 | 2.0 | 1.8 | 1.8 | 2.0 | 1.2 | 1.2 |
| 35,001–50,000 | 1.5 | 1.5 | 1.8 | 2.2 | 1.7 | 1.7 | 1.8 | 2.1 | 0.8 | 0.8 |
| 50,001 or more | 1.1 | 1.1 | 1.4 | 1.5 | 1.3 | 1.3 | 1.7 | 1.8 | 0.4 | 0.6 |
| Parents' highest education level | | | | | | | | | | |
| Less than high school | 3.4 | 3.4 | 3.0 | 3.1 | 2.8 | 3.3 | 2.1 | 2.2 | 2.6 | 2.7 |
| High school diploma/GED | 1.7 | 2.2 | 1.6 | 1.9 | 1.9 | 1.9 | 1.3 | 1.7 | 1.3 | 1.3 |
| Some college/vocational/technical | 1.3 | 1.3 | 1.7 | 1.7 | 1.5 | 1.6 | 1.7 | 1.5 | 0.8 | 0.8 |
| Bachelor's degree | 1.5 | 1.7 | 2.1 | 1.9 | 1.8 | 2.1 | 2.4 | 2.3 | 0.7 | 1.0 |
| Graduate/professional school | 1.5 | 1.6 | 2.4 | 2.0 | 1.9 | 1.6 | 2.5 | 2.5 | 1.0 | 0.8 |
| Family structure | | | | | | | | | | |
| Two biological/adoptive parents | 1.0 | 1.0 | 1.2 | 1.3 | 1.3 | 1.2 | 1.3 | 1.3 | 0.6 | 0.6 |
| One biological/adoptive parent | 1.6 | 1.9 | 1.5 | 1.8 | 1.9 | 1.9 | 1.4 | 1.7 | 1.4 | 1.3 |
| One biological/adoptive and one stepparent | 2.2 | 2.1 | 2.4 | 2.0 | 2.8 | 2.0 | 2.4 | 2.4 | 1.2 | 1.0 |
| Other relatives | 5.0 | 6.8 | 5.0 | 5.9 | 5.6 | 6.6 | 4.6 | 3.9 | 4.7 | 3.1 |
| Step- or foster parents | 14.6 | 10.6 | 12.3 | 11.1 | 15.5 | 9.8 | 15.8 | 10.0 | 12.3 | 9.2 |

# Parental Involvement in Schools

**Table S59-1** Standard errors for the percentage of students in grades K–12 whose parents reported involvement in their child's school, by grade and selected characteristics: 1996 and 1999—Continued

| Characteristic | Attended general meeting | | Attended scheduled meeting with teacher | | Attended school event | | Acted as a volunteer or served on a committee | | Indicated involvement in any of the four activities | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1999 | 1996 | 1999 | 1996 | 1999 | 1996 | 1999 | 1996 | 1999 |
| | | | | | Grades 9–12 | | | | | |
| **Total** | **0.9** | **1.0** | **0.8** | **1.1** | **0.9** | **0.9** | **0.9** | **0.7** | **0.7** | **0.7** |
| Race-ethnicity | | | | | | | | | | |
| White | 1.0 | 1.0 | 0.9 | 1.3 | 1.2 | 1.1 | 1.1 | 1.0 | 0.8 | 0.8 |
| Black | 2.7 | 2.2 | 2.4 | 2.3 | 2.7 | 2.5 | 1.9 | 1.7 | 2.3 | 2.0 |
| Hispanic | 3.1 | 2.6 | 2.7 | 2.3 | 2.9 | 2.1 | 2.3 | 1.5 | 2.3 | 2.1 |
| Other | 3.7 | 4.3 | 3.8 | 4.1 | 3.7 | 4.5 | 3.0 | 3.0 | 3.3 | 3.6 |
| Household income | | | | | | | | | | |
| $10,000 or less | 3.4 | 3.2 | 3.9 | 4.1 | 3.5 | 3.6 | 2.5 | 2.0 | 3.6 | 2.7 |
| 10,001–20,000 | 2.7 | 2.7 | 3.0 | 3.1 | 2.8 | 2.6 | 2.4 | 1.9 | 2.1 | 2.4 |
| 20,001–35,000 | 1.8 | 2.4 | 1.9 | 2.1 | 1.9 | 2.0 | 1.6 | 1.8 | 1.4 | 1.7 |
| 35,001–50,000 | 1.7 | 2.1 | 2.0 | 2.5 | 2.0 | 2.0 | 1.7 | 1.7 | 1.2 | 1.6 |
| 50,001 or more | 1.1 | 1.2 | 1.3 | 1.4 | 1.3 | 1.2 | 1.6 | 1.2 | 0.7 | 0.7 |
| Parents' highest education level | | | | | | | | | | |
| Less than high school | 3.7 | 3.7 | 3.4 | 3.8 | 3.1 | 3.4 | 1.9 | 1.6 | 3.2 | 3.6 |
| High school diploma/GED | 1.7 | 2.0 | 1.5 | 1.5 | 1.9 | 1.9 | 1.5 | 1.5 | 1.5 | 1.6 |
| Some college/vocational/technical | 1.6 | 1.6 | 1.7 | 1.8 | 1.7 | 1.8 | 1.2 | 1.6 | 1.2 | 1.2 |
| Bachelor's degree | 1.7 | 1.8 | 2.3 | 2.6 | 1.9 | 2.4 | 2.4 | 2.3 | 1.1 | 0.9 |
| Graduate/professional school | 1.4 | 1.3 | 2.0 | 2.2 | 1.6 | 1.5 | 2.0 | 2.0 | 0.9 | 0.9 |
| Family structure | | | | | | | | | | |
| Two biological/adoptive parents | 1.1 | 1.2 | 0.9 | 1.3 | 0.9 | 1.1 | 1.2 | 1.1 | 0.7 | 0.8 |
| One biological/adoptive parent | 1.8 | 1.9 | 1.7 | 1.8 | 2.1 | 1.8 | 1.6 | 1.2 | 1.6 | 1.4 |
| One biological/adoptive and one stepparent | 2.5 | 2.7 | 2.8 | 2.3 | 2.4 | 2.8 | 2.0 | 2.1 | 1.7 | 1.8 |
| Other relatives | 4.9 | 5.1 | 4.4 | 5.2 | 4.6 | 5.0 | 2.6 | 2.8 | 4.7 | 4.7 |
| Step- or foster parents | 13.1 | 15.3 | 11.6 | 13.3 | 12.0 | 11.8 | 12.1 | 9.5 | 9.3 | 12.1 |

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1996 (Parent and Family Involvement in Education Component) and 1999 (Parent Interview Component).

# Parents' Attitudes Toward Schools

Table S60-1 **Standard errors for the percentage of children in grades 3–12 with parents who were very satisfied with various aspects of the school their child attends, by selected family characteristics: 1993 and 1999**

| | Satisfaction measure | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Child's school | | Child's teachers | | School's academic standards | | School's order and discipline | |
| Characteristic | 1993 | 1999 | 1993 | 1999 | 1993 | 1999 | 1993 | 1999 |
| **Total** | **0.7** | **0.6** | **0.7** | **0.5** | **0.6** | **0.6** | **0.7** | **0.6** |
| Race-ethnicity | | | | | | | | |
| White | 0.7 | 0.7 | 0.8 | 0.6 | 0.7 | 0.8 | 0.6 | 0.8 |
| Black | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 | 1.3 | 1.6 | 1.3 |
| Hispanic | 1.8 | 1.1 | 1.5 | 1.2 | 1.5 | 1.2 | 2.1 | 1.2 |
| Other | 3.5 | 2.6 | 3.1 | 2.4 | 3.3 | 2.4 | 4.1 | 2.4 |
| Household income | | | | | | | | |
| Less than $10,000 | 1.9 | 2.3 | 2.0 | 2.0 | 1.6 | 1.9 | 2.3 | 2.2 |
| $10,001–20,000 | 1.4 | 1.8 | 1.4 | 1.7 | 1.6 | 1.8 | 2.1 | 1.7 |
| $20,001–35,000 | 1.4 | 1.1 | 1.1 | 1.1 | 1.1 | 1.2 | 1.8 | 1.1 |
| $35,001–50,000 | 1.4 | 1.5 | 1.4 | 1.2 | 1.1 | 1.4 | 1.1 | 1.3 |
| $50,001 or more | 0.9 | 0.9 | 0.9 | 1.0 | 0.9 | 0.9 | 1.0 | 0.9 |
| Parents' highest education level | | | | | | | | |
| Less than high school | 3.1 | 2.1 | 3.2 | 2.0 | 3.3 | 2.1 | 4.0 | 1.8 |
| High school diploma/GED | 1.0 | 1.1 | 0.9 | 1.1 | 0.9 | 1.2 | 1.0 | 1.2 |
| Some college/vocational/technical | 1.1 | 1.0 | 1.2 | 1.0 | 1.1 | 1.0 | 1.1 | 1.2 |
| Bachelor's degree | 1.6 | 1.5 | 1.6 | 1.3 | 1.5 | 1.5 | 1.5 | 1.3 |
| Graduate/professional degree | 1.2 | 1.3 | 1.3 | 1.4 | 1.2 | 1.4 | 1.4 | 1.3 |
| Family structure | | | | | | | | |
| Two biological/adoptive parents | 0.6 | 0.8 | 0.6 | 0.7 | 0.6 | 0.8 | 0.8 | 0.8 |
| One biological/adoptive parent | 1.3 | 1.1 | 1.5 | 0.9 | 1.3 | 1.2 | 1.9 | 0.9 |
| One biological/adoptive and one stepparent | 33.9 | 1.7 | 23.6 | 1.5 | 25.8 | 1.6 | 31.8 | 1.5 |
| Other relatives | 6.6 | 3.7 | 6.7 | 3.8 | 6.4 | 3.5 | 6.4 | 3.8 |
| Urbanicity | | | | | | | | |
| Live inside urban area | 0.7 | 0.7 | 0.8 | 0.8 | 0.7 | 0.8 | 0.8 | 0.8 |
| Live outside urban area | 1.4 | 1.7 | 2.2 | 1.5 | 1.8 | 1.5 | 2.1 | 1.7 |
| Rural | 1.8 | 1.3 | 1.7 | 1.2 | 1.5 | 1.2 | 1.3 | 1.3 |

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1993 (School Safety and Discipline Component) and 1999 (Parent Interview Component).

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## Public Elementary and Secondary Expenditures

Table S61-1 Standard deviations for the public school district expenditures per student, by selected district characteristics: School year 1995–96

| Selected district characteristic | Expenditures | | | | | Number of districts |
|---|---|---|---|---|---|---|
| | Total | Instruction | Support services | Capital outlay | Other | |
| Metropolitan status | | | | | | |
| Primarily serves a central city | $11,966 | $6,836 | $4,627 | $881 | $1,013 | — |
| Serves a metropolitan area but not a central city | 8,122 | 3,429 | 3,883 | 1,242 | 2,166 | — |
| Does not serve a metropolitan area | 12,914 | 4,308 | 8,910 | 1,262 | 1,790 | — |
| Children in district below the poverty level | | | | | | |
| Less than 5.0 percent | 17,714 | 6,479 | 11,702 | 1,282 | 2,748 | — |
| 5.0–9.9 percent | 3,046 | 1,379 | 806 | 1,345 | 1,285 | — |
| 10.0–20.0 percent | 5,464 | 1,900 | 2,765 | 984 | 1,203 | — |
| More than 20.0 percent | 4,743 | 2,143 | 1,739 | 1,358 | 1,318 | — |

— Not applicable.

NOTE: The standard deviation is an indication of how dispersed or spread out the distribution is about its center or the mean. As the values in a distribution become more dispersed, the standard deviation grows larger.

SOURCE: U.S. Department of Education, NCES. Common Core of Data, "Public School District Universe Survey," 1995–96, and "Public School District Financial Survey," 1995–96.

## Change in the Sources of Public School Financing

Table S63-1 Standard deviations for the percentage distribution of revenues for public elementary and secondary schools according to source of funds and region, by region: 1991–92 to 1996–97

| | 1991–92 | 1992–93 | 1993–94 | 1994–95 | 1995–96 | 1996–97 |
|---|---|---|---|---|---|---|
| | | | United States | | | |
| Local | 20.7 | 20.69 | 20.6 | 20.7 | 20.7 | 20.5 |
| State | 18.6 | 18.16 | 18.5 | 18.7 | 18.6 | 18.5 |
| Federal | 9.36 | 9.95 | 11.2 | 11.1 | 10.2 | 10.3 |
| | | | Local | | | |
| Northeast | 12.4 | 12.57 | 12.0 | 12.3 | 12.3 | 12.1 |
| Midwest | 8.39 | 8.0 | 10.0 | 11.6 | 11.8 | 10.7 |
| South | 17.3 | 16.8 | 16.7 | 17.0 | 17.1 | 16.6 |
| West | 18.3 | 17.5 | 16.9 | 16.8 | 16.1 | 16.1 |
| | | | State | | | |
| Northeast | 11.8 | 11.8 | 11.3 | 11.6 | 11.7 | 11.5 |
| Midwest | 9.0 | 8.7 | 10.8 | 12.5 | 12.4 | 11.3 |
| South | 16.8 | 16.4 | 16.3 | 16.4 | 16.4 | 16.4 |
| West | 17.2 | 16.1 | 15.8 | 15.9 | 15.0 | 14.9 |
| | | | Federal | | | |
| Northeast | 1.1 | 1.2 | 1.1 | 1.0 | 1.0 | 0.9 |
| Midwest | 2.3 | 2.5 | 2.3 | 2.4 | 2.2 | 2.3 |
| South | 3.0 | 2.8 | 2.6 | 2.3 | 2.2 | 3.0 |
| West | 2.5 | 2.9 | 2.4 | 2.2 | 2.3 | 2.5 |

NOTE: The standard deviation is an indication of how dispersed or spread out the distribution is about its center or the mean. As the values in a distribution become more dispersed, the standard deviation grows larger.

SOURCE: U.S. Department of Education, NCES. Common Core of Data, "Public School District Universe Survey," 1991–92 through 1996–97, and "Public School District Financial Survey," 1991–92 through 1996–97.

## Instructional Expenditures for Higher Education

Table S66-1 Standard errors for the percentage of students in grades 6–12 whose parents reported that their children would continue education after high school, and of those students, percentage whose parents reported having taken various steps to prepare to pay for their children's postsecondary education, by grade and family income: 1999

| Grade and family income | Percentage of students whose parents reported that they expected their children to continue education after high school | Of students whose parents expected them them to go on to postsecondary education, percentage whose parents reported that they had: Obtained information/had an estimate of tuition and fees | Started saving money/making financial plans | Talked with someone/read materials about financial aid | Heard of Lifetime Learning or Hope Scholarship tax credits |
|---|---|---|---|---|---|
| **Total** | **0.4** | **0.7** | **0.7** | **0.6** | **0.6** |
| Grade | | | | | |
| 6–8 | 0.5 | 1.0 | 1.1 | 0.8 | 1.0 |
| 9–12 | 0.5 | 0.8 | 0.7 | 0.9 | 0.8 |
| Family income | | | | | |
| $25,000 or less | 0.9 | 1.3 | 1.3 | 1.4 | 1.0 |
| $25,001-50,000 | 0.6 | 1.3 | 1.4 | 1.1 | 1.1 |
| $50,001–75,000 | 0.6 | 1.3 | 1.4 | 1.5 | 1.5 |
| Over $75,000 | 0.3 | 1.2 | 1.0 | 1.4 | 1.4 |

SOURCE: U.S. Department of Education, NCES. National Household Education Survey (NHES), 1999 (Parent Interview Component).

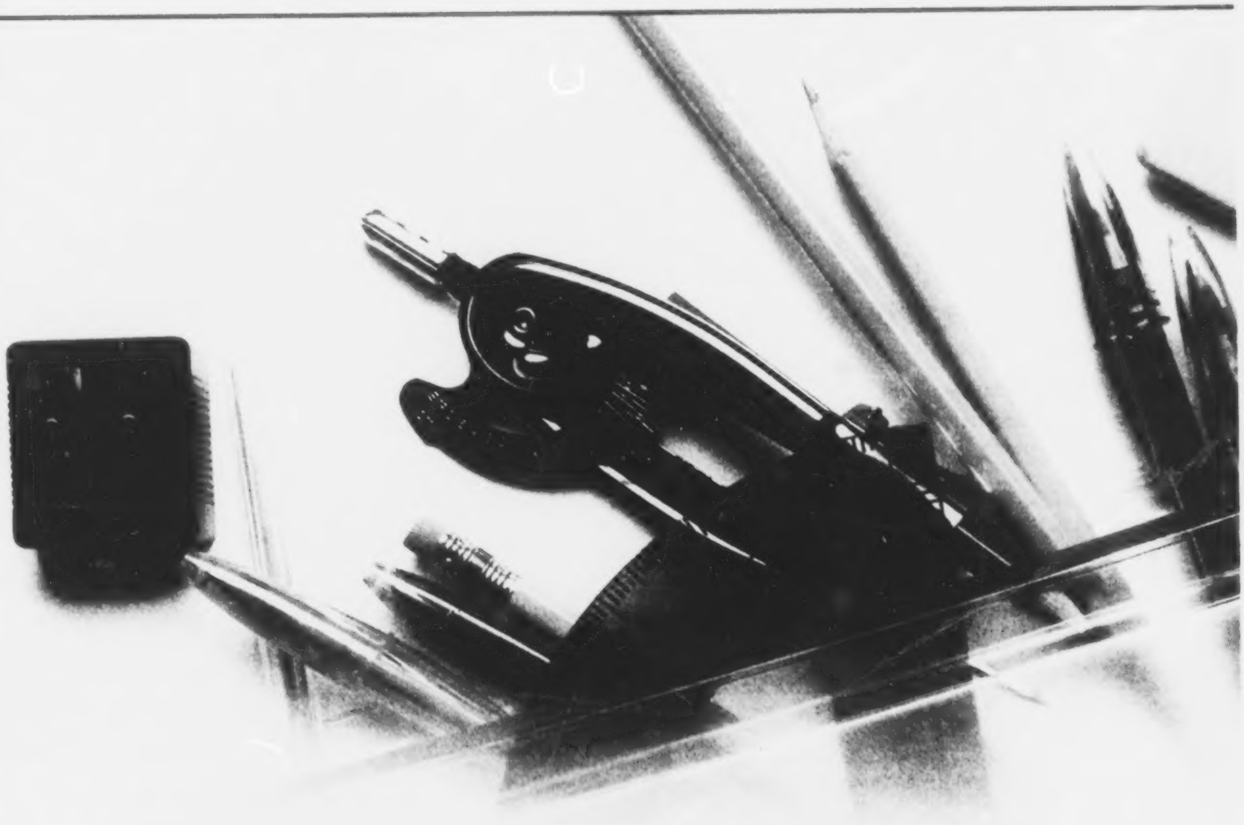
## Net Price of College Attendance

Table S67-1 Standard errors for the average price of college attendance and student financial aid for dependent full-time, full-year undergraduates, by institution and family income: Academic year 1995–96

| Type of institution and family income | Tuition/fees | Total price | Grants | Net price | Student loans | Student earnings |
|---|---|---|---|---|---|---|
| **Total** | **177.4** | **205.4** | **79.0** | **155.6** | **36.4** | **110.9** |
| Public 4-year | 121.6 | 150.3 | 49.6 | 145.6 | 41.6 | 136.4 |
| Low income | 141.3 | 207.3 | 123.0 | 169.8 | 98.4 | 186.2 |
| Lower middle | 109.4 | 151.7 | 79.4 | 135.5 | 86.6 | 285.8 |
| Upper middle | 126.9 | 155.1 | 48.7 | 151.6 | 62.3 | 232.4 |
| High income | 181.2 | 181.7 | 53.0 | 189.0 | 56.3 | 226.7 |
| Private, not-for-profit 4-year | 334.3 | 408.8 | 177.2 | 319.5 | 70.3 | 113.5 |
| Low income | 571.8 | 749.6 | 339.0 | 607.4 | 155.7 | 170.6 |
| Lower middle | 368.6 | 425.5 | 325.2 | 276.1 | 108.0 | 150.3 |
| Upper middle | 342.3 | 402.4 | 220.4 | 341.7 | 103.4 | 213.9 |
| High income | 339.7 | 403.6 | 133.9 | 406.9 | 72.5 | 219.0 |
| Public 2-year | 56.8 | 169.6 | 77.9 | 206.7 | 38.2 | 398.4 |
| Low income | 91.9 | 261.2 | 140.4 | 332.8 | 67.2 | 956.0 |
| Lower middle | 83.0 | 267.6 | 87.9 | 298.6 | 74.9 | 400.6 |
| Upper middle | 107.9 | 216.2 | 41.4 | 222.4 | 82.4 | 722.7 |
| High income | 114.7 | 187.9 | 49.4 | 193.0 | 59.2 | 848.2 |

SOURCE: U.S. Department of Education, NCES. National Postsecondary Student Aid Study (NPSAS 1996), Undergraduate Data Analysis System

# Glossary



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# Glossary

## A

*A Nation at Risk*: A report published by the U.S. Department of Education in 1983 highlighting deficiencies in knowledge of the Nation's students and population as a whole in areas such as literacy, mathematics, geography, and basic science.

**Academic support:** This category of college expenditures includes expenditures for support services that are an integral part of the institution's primary missions of instruction, research, or public service. Includes expenditures for libraries, galleries, audio/visual services, academic computing support, ancillary support, academic administration, personnel development, and course and curriculum development.

**Adult education:** College, vocational, or occupational programs, continuing education or noncredit courses, correspondence courses and tutoring, as well as courses and other educational activities provided by employers, community groups, and other providers.

**Advanced degree:** Any formal degree attained after the bachelor's degree. Advanced degrees include master's degrees, doctoral degrees, and first-professional degrees.

**Appropriations (federal funds):** Budget authority provided through the congressional appropriation process that permits federal agencies to incur obligations and to make payments.

**Appropriations (institutional revenues):** An amount (other than a grant or contract) received from or made available to an institution through an act of a legislative body.

**Associate's degree:** A degree granted for the successful completion of a subbaccalaureate program of studies, usually requiring at least 2 years (or the equivalent) of full-time college-level study. This includes degrees granted in a cooperative or work-study program.

**Auxiliary enterprises:** This category includes those essentially self-supporting operations that exist to furnish a service to students, faculty, or staff, and that charge a fee that is directly related to, although not necessarily equal to, the cost of the service. Examples are residence halls, food services, college stores, and intercollegiate athletics.

**Average daily attendance (ADA):** The aggregate attendance of students in a school during a reporting period (normally a school year) divided by the number of days that school is in session during this period. Only days on which the students are under the guidance and direction of teachers should be considered days that school is in session.

## B

**Baccalaureate degree:** (See Bachelor's degree.)

**Bachelor's degree:** A degree granted for the successful completion of a baccalaureate program of studies, usually requiring at least 4 years (or the equivalent) of full-time college-level study. This includes degrees granted in a cooperative or work-study program.

## C

**Capital outlay:** The expenditures for property, and for buildings and alterations completed by school district staff or contractors.

**Care from a relative:** Includes care on a regular basis from nonparental and nonguardian relatives (e.g., grandparents, siblings, aunts, uncles) that occurs in or outside the child's home.

**Care from a nonrelative:** Includes care on a regular basis by home child-care providers, regular sitters, or neighbors. Excludes Head

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Start, day-care centers, nursery schools, or preschools.

**Care from a center-based program:** Includes care on a regular basis that occurs at Head Start, day-care centers, nursery schools, or preschools.

**Child cares for self:** Includes self-care only.

**Parental care only:** Includes care on a regular basis by parents only. Excludes children who receive care from relatives, nonrelatives, center-based programs, or self on a regular basis.

**Carnegie unit:** A standard of measurement used for secondary education that represents the completion of a course that meets one period per day for one year.

**Catholic school:** A private school over which a Roman Catholic church group exercises some control or provides some form of subsidy. Catholic schools for the most part include those operated or supported by: a parish, a group of parishes, a diocese, or a Catholic religious order. (See Orientation.)

**Center-based programs:** Including Head Start, nursery school, prekindergartens, day-care centers and preschools.

**Certificate:** An award granted for the successful completion of a subbaccalaureate program of studies, which usual requires less than 2 years of full-time postsecondary study.

**Cohort:** A group of individuals who have a statistical factor in common; for example, year of birth.

**College:** A postsecondary school that offers general or liberal arts education, usually leading to an associate's, bachelor's, master's, doctor's, or first-professional degree. Junior colleges and community colleges are included under this terminology.

**Comprehensive reform:** Efforts to improve education for all students by establishing high content and performance standards and redesigning the various components of the educational system in a coordinated and coherent fashion to support students' learning to the standards.

**Condition of schools:** The condition of schools can be classified into three groups depending on when they were built and renovated: "oldest" is defined as being built before 1970 and never renovated or renovated before 1980. "Moderate" is defined as being built between 1970 and 1984 or built before 1970 and renovated in 1980 or later. "Newest" is defined as being built after 1984, renovated or not.

**Constant dollars:** Dollar amounts that have been adjusted by means of price and cost indexes to eliminate inflationary factors and allow direct comparison across years.

**Consumer price index (CPI):** This price index measures the average change in the cost of a fixed-market basket of goods and services purchased by consumers.

**Control of institutions:** A classification of institutions of elementary/secondary or postsecondary education by whether the institution is operated by publicly elected or appointed officials (public control) or by privately elected or appointed officials and derives its major source of funds from private sources (private control).

**Core subjects:** *A Nation at Risk* recommended that all students seeking a high school diploma be required to enroll in a core curriculum called "New Basics." The core subjects included in this plan are 4 units of English; 3 units each of science, social studies, and mathematics; and 0.5 units of computer science.

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**Cost of college attendance:** Cost of living for students attending postsecondary institutions, including tuition and fees, books, room and board, child care, transportation, and other miscellaneous expenses.

**Current dollars:** Dollar amounts that have not been adjusted to compensate for inflation.

**Current expenditures (elementary/secondary):** The expenditures for operating local public schools, excluding capital outlay and interest on school debt. These expenditures include such items as salaries for school personnel, fixed charges, student transportation, school books and materials, and energy costs. Beginning in 1980–81, expenditures for state administration are excluded.

**Current expenditures per pupil in enrollment:** Current expenditures for the regular school term divided by the total number of students registered in a given school unit at a given time, generally in the fall of a year.

**Current-fund expenditures:** (postsecondary) Money spent to meet current operating costs, including salaries, wages, utilities, student services, public services, research libraries, scholarships, fellowships, auxiliary enterprises, hospitals, and independent operations. Excludes loans, capital expenditures, and investments.

**Current-fund revenues:** (postsecondary) Money received during the current fiscal year from revenue that can be used to pay obligations currently due, and surpluses reappropriated for the current fiscal year.

## D

**Dependent student:** A student who, under federal criteria, is considered to be financially dependent on his or her parents or guardians. Most full-time students are considered dependent until they are 24 years old.

**Distance education:** Instructional programs or courses in which the instructor and students need not be in the same physical place, particularly those relying on computers, audio, or video technology as the medium for delivery and, sometimes, for two-way interaction.

**Doctor's degree:** An earned degree carrying the title of Doctor. The Doctor of Philosophy degree (Ph.D.) is the highest academic degree and requires mastery within a field of knowledge and demonstrated ability to perform scholarly research. Other doctorates are awarded for fulfilling specialized requirements in professional fields, such as education (Ed.D.), musical arts (D.M.A.), business administration (D.B.A.), and engineering (D.Eng. or D.E.S.). Many doctor's degrees in both academic and professional fields require an earned master's degree as a prerequisite. First-professional degrees, such as M.D. and D.D.S., are not included under this heading. (See First-professional degree.)

**Dropout:** The term is used to describe both the event of leaving school before graduating and the status of an individual who is not in school and who is not a graduate. Transferring schools from a public to a private school, for example, is not regarded as a dropout event. A person who drops out of school may later return and graduate, but is called a dropout at the time he or she left school. At the time the person returns to school, he or she is called a stopout. Measures to describe these often complicated behaviors include the event dropout rate (or the closely related school persistence rate), the status dropout rate, and the high school completion rate.

## E

**Educational and general expenditures:** (See Expenditures.)

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**Educational and general expenditures:** The sum of current-fund expenditures for instruction, research, public service, academic support, student services, institutional support, operation and maintenance of plant, and awards from restricted and unrestricted funds.

**Educational attainment:** The highest grade of regular school attended and completed.

**Elementary:** Grades K–8.

**Elementary school:** A school classified as elementary by state and local practice and composed of any span of grades not above grade 8. Preschool or kindergarten is included under this heading only if it is an integral part of an elementary school or a regularly established school system.

**Elementary/secondary school:** As reported in this publication, includes only regular schools (i.e., schools that are part of state and local school systems, and also most not-for-profit private elementary/secondary schools, both religiously affiliated and nonsectarian). Schools not reported include subcollegiate departments of institutions of higher education, residential schools for exceptional children, federal schools for American Indians, and federal schools on military posts and other federal installations.

**English as a Second Language (ESL):** Programs that provide intensive instruction in English for students with limited English proficiency.

**English:** A group of instructional programs that describes the English language arts, including composition, creative writing, and the study of literature.

**Enrollment:** The total number of students registered in a given school unit at a given time, generally in the fall of a year.

**Expenditures per pupil:** Charges incurred for a particular period of time divided by a student unit of measure, such as enrollment, average daily attendance, or average daily membership.

**Expenditures:** Charges incurred, whether paid or unpaid, which are presumed to benefit the current fiscal year. For elementary/secondary schools, these include all charges for current outlays plus capital outlays and interest on school debt. For postsecondary education institutions, these include current outlays plus capital outlays. For government, these include charges net of recoveries and other correcting transactions other than for retirement of debt, investment in securities, extension of credit, or as agency transaction. Also, government expenditures include only external transactions, such as the provision of prerequisites or other payments in kind. Aggregates for groups of governments exclude intergovernmental transactions among the governments.

### F

**Family income:** The combined income of all family members 14 years old and older living in the household for the period of 1 year. Income includes money income from jobs; net income from business, farm, or rent; pensions; dividends; interest; social security payments; and any other money income.

**Federal aid:** Student financial aid provided through the federal government. This aid can either be provided by or administered by a federal agency. Federal agencies providing aid include the Department of Education, Department of Health and Human Services, Department of Defense, Veterans Administration, and the National Science Foundation. Federal aid can be in the form of grants, loans, and work-study aid.

**Federal funds:** Amounts collected and used by the federal government for the general purposes of the government. There are four types of

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federal fund accounts: the general fund, special funds, public enterprise funds, and intragovernmental funds. The major federal fund is the general fund, which is derived from general taxes and borrowing. Federal funds also include certain earmarked collections, such as those generated by and used to finance a continuing cycle of business-type operations.

**First-professional degree:** A degree that signifies both completion of the academic requirements for beginning practice in a given profession and a level of professional skill beyond that normally required for a bachelor's degree. This degree is usually based on a program requiring at least 2 academic years of work prior to entrance and a total of at least 6 academic years of work to complete the degree program, including both prior-required college work and the professional program itself. By NCES definition, first-professional degrees are awarded in the fields of dentistry (D.D.S or D.M.D.), medicine (M.D.), optometry (O.D.), osteopathic medicine (D.O.), pharmacy (D.Phar.), podiatric medicine (D.P.M.), veterinary medicine (D.V.M.), chiropractic (D.C. or D.C.M.), law (J.D.), and theological professions (M.Div. or M.H.L.).

**Fiscal year:** The yearly accounting period for the federal government, which begins on October 1 and ends on the following September 30. The fiscal year is designated by the calendar year in which it ends; for example, fiscal year 1992 begins on October 1, 1991, and ends on September 30, 1992. (From fiscal year 1844 to fiscal year 1976 the fiscal year began on July 1 and ended on the following June 30.)

**Foreign languages:** A group of instructional programs that describes the structure and use of language that is common or indigenous to individuals of the same community or nation, the same geographical area, or the same cultural traditions. Programs cover such features as sound, literature, syntax, phonology, semantics, sentences, prose, and verse, as well as the development of skills and attitudes used in communicating and evaluating thoughts and feelings through oral and written language.

**Free lunch eligibles:** The National School Lunch Program's assistance program for low-income children. Families with school-age children who fall below the poverty level and have no other significant assets are eligible to receive government assistance in the form of free or reduced-price school lunches.

**Full-time enrollment:** The number of students enrolled in higher education courses with a total credit load equal to at least 75 percent of the normal full-time course load.

**Full-time instructional faculty:** Those members of the instruction/research staff who are employed full time as defined by the institution, including faculty with released time for research and faculty on sabbatical leave. The full-time category excludes faculty who are employed to teach less than two semesters, three quarters, two trimesters, or two 4-month sessions; replacements for faculty on sabbatical leave or those on leave without pay; faculty for preclinical and clinical medicine; faculty who are donating their services; faculty who are members of military organizations and who are paid on a different pay scale from civilian employees; academic officers whose primary duties are administrative; and graduate students who assist in the instruction of courses.

**Full-time worker:** One who is employed for 35 or more hours per week, including paid leave for illness, vacation, and holidays. Hours may be reported either for a survey reference week, or for the previous calendar year, in which case they refer to the usual hours worked.

**Full-time-equivalent (FTE) enrollment:** For institutions of higher education, enrollment of full-time students, plus the full-time equivalent

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of part-time students as reported by institutions. In the absence of an equivalent reported by an institution, the FTE enrollment is estimated by adding one-third of part-time enrollment to full-time enrollment.

### G

**GED recipient:** A person who has obtained certification of high school equivalency by meeting state requirements and passing an approved exam, which is intended to provide an appraisal of the person's achievement or performance in the broad subject matter areas usually required for high school graduation.

**Government appropriation:** An amount (other than a grant or contract) received from or made available to an institution through an act of a legislative body.

**Government grant or contract:** Revenues from a government agency for a specific research project or other program.

**Graduate:** An individual who has received formal recognition for the successful completion of a prescribed program of studies.

**Grants:** Also known as scholarships, these are funds for postsecondary education that do not have to be repaid.

**Gross Domestic Product (GDP):** Gross national product less net property income from abroad. Both gross national product and gross domestic product aggregate only the incomes of residents of a nation, corporate and individual, derived directly from the current production of goods and services. However, gross national product also includes net property from abroad. (See Gross National Product.)

**Gross National Product (GNP):** A measure of the money value of the goods and services available to the nation from economic activity. GNP can be viewed in terms of expenditure categories, which include purchases of goods and services by consumers and government, gross private domestic investment, and net exports of goods and services. The goods and services included are largely those bought for final use (excluding illegal transactions) in the market economy. A number of inclusions, however, represent imputed values, the most important of which is rental value of owner-occupied housing. GNP, in this broad context, measures the output attributable to the factors of production, labor, and property supplied by U.S. residents.

### H

**Hearing impairment:** An impairment in hearing, whether permanent or fluctuating, that adversely affects a child's educational performance, in the most severe case because the child is impaired in processing linguistic information through hearing.

**High school:** A secondary school offering the final years of high school work necessary for graduation, usually including grades 10, 11, 12 (in a 6-3-3 plan) or grades 9, 10, 11, and 12 (in a 6-2-4 plan).

**HOPE Scholarship Tax Credit:** This federal income tax credit is designed to help taxpayers pay the cost of the first 2 years of postsecondary education.

**Humanities:** Instructional programs in the following fields: area and ethnic studies, foreign languages, letters, liberal/general studies, multi/interdisciplinary studies, philosophy and religion, theology, and the visual and performing arts.

### I

**Institutional support:** The category of postsecondary education expenditures that includes day-to-day operational support for colleges, excluding expenditures for physical plant opera-

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tions. Examples of institutional support include general administrative services, executive direction and planning, legal and fiscal operations, and community relations.

**Instruction:** This category includes expenditures of the colleges, schools, departments, and other instructional divisions of postsecondary education institutions, and expenditures for departmental research and public service, which are not separately budgeted. Includes expenditures for both credit and noncredit activities. Excludes expenditures for academic administration where the primary function is administration (e.g., academic deans).

**Instructional expenditures (elementary/secondary):** Current expenditures for activities directly associated with the interaction between teachers and students. These include teacher salaries and benefits, supplies (such as textbooks), and purchased instructional services.

**Instructional staff:** Full-time-equivalent number of positions, not the number of different individuals occupying the positions during the school year. In local schools, includes all public elementary and secondary (junior and senior high) day-school positions that are in the nature of teaching or in the improvement of the teaching-learning situation. Includes consultants or supervisors of instruction, principals, teachers, guidance personnel, librarians, psychological personnel, and other instructional staff. Excludes administrative staff, attendance personnel, clerical personnel, and junior college staff.

## K

**Kindergarten:** Includes transitional kindergarten, kindergarten, and pre-first-grade students.

## L

**Labor force:** Individuals employed as civilians, unemployed, or in the armed services during the survey week. The "civilian labor force" is composed of all civilians classified as employed or unemployed. (See Employed and Unemployed.)

**Life sciences:** Life sciences are instructional programs that describe the systematic study of living organisms. Life sciences include biology, biochemistry, biophysics, and zoology.

**Limited-English-proficient:** A concept developed to assist in identifying those language-minority students (children from language backgrounds other than English) who need language assistance services, in their own language or in English, in the schools. The Bilingual Education Act, reauthorized in 1988 (P.L. 100-297), describes a limited-English-proficient (LEP) student as one who:

(1) meets one or more of the following conditions:

> (a) a student who was born outside the United States or whose native language is not English;
>
> (b) a student who comes from an environment where a language other than English is dominant; or
>
> (c) a student who is an American Indian or Alaskan Native and comes from an environment where a language other than English has had a significant impact on his/her level of English language proficiency; and

(2) has sufficient difficulty speaking, reading, writing, or understanding the English language to deny him or her the opportunity to learn successfully in English-only classrooms.

Many ways of making this determination about an individual students' English proficiency are being used by school systems across the United States. These include various combinations of

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home language surveys, informal teacher determination, formal interviews, and a number of types of assessment tests for classification, placement, and monitoring of progress.

**Loan:** Borrowed money that must be repaid.

**Local education agency (LEA):** (See School district.)

**Locus of control:**

Task control: tasks where students were asked only to follow the procedures demonstrated by their teacher.

Student control: tasks where students had control over the procedures used to solve a problem.

## M

**Mandatory transfers:** Those transfers that must be made to fulfill a binding legal obligation of the institution. Includes mandatory debt-service provisions relating to academic and administrative buildings, including amounts set aside for debt retirement and interest and required provisions for renewal and replacements to the extent not financed from other sources. Also includes the institutional matching portion for Perkins Loans when the source of funds is current revenue.

**Master's degree:** A degree awarded for successful completion of a program generally requiring 1 or 2 years of full-time college-level study beyond the bachelor's degree. One type of master's degree, including the Master of Arts degree, or M.A., and the Master of Science degree, or M.S., is awarded in the liberal arts and sciences for advanced scholarship in a subject field or discipline and demonstrated ability to perform scholarly research. A second type of master's degree is awarded for the completion of a professionally oriented program, for example, an M.Ed. in education, an M.B.A. in business administration, an M.F.A. in fine arts, an M.M. in music, an M.S.W. in social work, and an M.P.A. in public administration. A third type of master's degree is awarded in professional fields for study beyond the first-professional degree, for example, the Master of Laws (LL.M.) and Master of Science in various medical specializations.

**Metropolitan population:** The population residing in metropolitan statistical areas (MSAs). (See Metropolitan Statistical Area.)

**Metropolitan Statistical Area (MSA):** A large population nucleus and the nearby communities that have a high degree of economic and social integration with that nucleus. Each MSA consists of one or more entire counties (or county equivalents) that meet specified standards pertaining to population, commuting ties, and metropolitan character. In New England, towns and cities, rather than counties, are the basic units. MSAs are designated by the Office of Management and Budget. An MSA includes a city and, generally, its entire urban area and the remainder of the county or counties in which the urban area is located. An MSA also includes such additional outlying counties that meet specified criteria relating to metropolitan character and level of commuting of workers into the central city or counties. Specified criteria governing the definition of MSAs recognized before 1980 are published in Standard Metropolitan Statistical Areas: 1975, issued by the Office of Management and Budget. New MSAs were designated when 1980 and 1990 counts showed that they met one or both of the following criteria:

(1) Included a city with a population of at least 50,000 within their corporate limits; or

(2) Included a Census Bureau-defined urbanized area (which must have a population of at least 50,000) and a total MSA population of at least 100,000 (or, in New England, 75,000).

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**Migrant Education Program Summer-Term Projects:** Projects that use Migrant Education Program (MEP) funds to provide instructional and/or support services to migrant students during the summer.

**Minority:** Any racial-ethnic group that is non-white and not Hispanic is considered minority.

**Modal grade:** The modal grade is the year of school in which the largest proportion of students of a given age are enrolled. Enrolled persons are classified according to their relative progress in school; that is, whether the grade or year in which they were enrolled was below, at, or above the modal (or typical) grade for persons of their age at the time of the survey.

**Multiple disabilities:** concomitant impairments (such as mental retardation-blindness, mental retardation-orthopedic impairment, etc.), the combination of which causes such severe educational problems that they cannot be accommodated in special education programs solely for one of the impairments. The term does not include deaf-blindness.

## N

**Natural sciences:** A group of fields of study that includes the life sciences, physical sciences, and mathematics.

**New Basics Curriculum:** A minimum curriculum recommended by the National Commission on Excellence in Education (NCEE) to be completed by high school graduates that consists of: 4 years of English, 3 years of mathematics, 3 years of science, 3 years of social studies, and one-half year of computer science. College-bound high school graduates are also advised to complete 2 years of foreign language.

**Nonmetropolitan residence group:** The population residing outside metropolitan statistical areas. (See Metropolitan statistical area.)

**Nonsectarian school:** A private school whose curriculum and operation are independent of religious orientation and influence in all but incidental ways.

**Nonsupervisory instructional staff:** Persons such as curriculum specialists, counselors, librarians, remedial specialists, and others possessing education certification but not responsible for the day-to-day teaching of the same group of pupils.

**Nontenure-track faculty:** Faculty members who were either not on the tenure track or whose faculty status lacked a tenure system at the sampled institution.

**Nursery school:** (See Preprimary.)

## O

**Obligations:** Amounts of orders placed, contracts awarded, services received, or similar legally binding commitments made by federal agencies during a given period that will require outlays during the same or some future period.

**Orthopedic impairments:** A severe orthopedic impairment that adversely affects a child's educational performance. The term includes impairments caused by congenital anomaly (e.g., clubfoot, absence of some member, etc.), impairments caused by disease (e.g., poliomyelitis, bone tuberculosis, etc.), and impairments from other causes (e.g., cerebral palsy, amputations, and fractures or burns that cause contractures).

**Other expenditures:** Other than support services and capital outlay, the sum of all other current fund expenditures for community services, nonpublic school programs, adult education, community colleges, interest on school debt, and other expenditures.

**Other religious school:** A private school that is affiliated with an organized religion or denomination other than Roman Catholicism or

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that has a religious orientation other than Catholicism in its operation and curriculum.

**Other support services staff:** (elementary and secondary school) All staff not reported in other categories. This group includes media personnel, social workers, data processors, health maintenance workers, bus drivers, security, cafeteria workers, and other staff.

**Outlays:** The value of checks issued, interest accrued on the public debt, or other payments made, net of refunds and reimbursements.

### P

**Parent:** In the Current Population Survey, a parent is defined as a biological, adoptive, step, or foster parent, or a legal guardian. In other words, "parents" have some biological or legal association to the child. A parent is not necessarily the head of the household. A parent's highest education level was determined by merging information from the parent's record with information from his or her children's record. When no parent resided in the household, information from the legal guardian's record was merged with information from the children's record.

**Part-time enrollment:** The number of students enrolled in higher education courses with a total credit load less than 75 percent of the normal full-time credit load.

**Percentile (score):** A value on a scale of zero to 100 that indicates the percent of a distribution that is equal to or below it. For example, a score in the 95th percentile is a score equal to or better than 95 percent of all other scores.

**Personal income:** Current income received by persons from all sources minus their personal contributions for social insurance. Classified as "persons" are individuals (including owners of unincorporated firms), nonprofit institutions serving individuals, private trust funds, and private noninsured welfare funds. Personal income includes transfers (payments not resulting from current production) from government and business such as social security benefits and military pensions, but excludes transfers among persons.

**Postsecondary education:** The provision of formal instructional programs with a curriculum designed primarily for students who have completed the requirements for a high school diploma or equivalent. This includes programs of an academic, vocational, and continuing professional education purpose, and excludes vocational and adult basic education programs (see also *Supplemental Note 4*).

**Prekindergarten:** (See Preprimary.)

**Preprimary:** Elementary education programs for children who are too young for first grade. Includes center-based programs and kindergarten.

**Private school or institution:** A school or institution that is controlled by an individual or agency other than a state, a subdivision of a state, or the federal government, which is usually not supported primarily by public funds, and is not operated by publicly elected or appointed officials.

**Public service:** Funds budgeted specifically for public service and expended for activities established primarily to provide noninstructional services beneficial to groups external to the institution. Examples are seminars and projects provided to particular sectors of the community and expenditures for community services and cooperative extension services.

### R

**Remedial course (postsecondary):** Courses provided in reading, writing, or mathematics for college students lacking those skills necessary to perform college-level work at the level

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required by the institution; thus, what constitutes remedial courses varies from institution to institution.

**Remedial education:** Instruction for a student lacking the reading, writing, or mathematics skills necessary to perform college-level work at the level required by the attended institution.

**Research:** Funds expended for activities specifically organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted by and organizational unit within the institution. Does not include nonresearch expenditures (e.g., training).

**Revenues:** All funds received from external sources, net of refunds, and correcting transactions. Noncash transactions such as receipt of services, commodities, or other receipts "in kind" are excluded, as are funds received from the issuance of debt, liquidation of investments, and nonroutine sale of property.

## S

**Salary workers:** Any person who worked one or more days during the previous year and was paid on the basis of a yearly salary is considered a salary worker.

**Salary:** The total amount regularly paid or stipulated to be paid to an individual, before deductions, for personal services rendered while on the payroll of a business or organization.

**Scholarships and fellowships:** This category of college expenditures applies only to money given in the form of outright grants and trainee stipends to individuals enrolled in formal course work, either for credit or not. Aid to students in the form of tuition or fee remissions is included. College work-study funds are excluded and are reported under the program in which the student is working. In the tabulations in this volume, Pell grants are not included in this expenditure category.

**Scholastic Assessment Test (SAT):** An examination administered by the Educational Testing Service and used to predict the facility with which an individual will progress in learning college-level academic subjects.

**School administrators:** Those staff members whose activities are concerned with directing and managing the operation of a particular school. They may be principals or assistant principals, including those who coordinate school instructional activities with those of the local education agency (LEA) and other appropriate units.

**School district:** An education agency at the local level that exists primarily to operate public schools or to contract for public school services. Synonyms are "local basic administrative unit" and "local education agency."

**School year:** The 12-month period of time denoting the beginning and ending dates for school accounting purposes, usually from July 1 through June 30.

**Science:** The body of related courses concerned with knowledge of the physical and biological world and with the processes of discovering and validating this knowledge.

**Secondary:** 9–12.

**Secondary school:** A school that has any span of grades beginning with the next grade following an elementary or middle school (usually grade 7, 8, or 9) and ending with or below grade 12. Both junior high schools and senior high schools are included.

**Social studies:** A group of instructional programs that describes the substantive portions of behavior, past and present activities, interactions, and organizations of people associated

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together for religious, benevolent, cultural, scientific, political, patriotic, or other purposes.

**Socioeconomic status (SES):** The SES quartile variable used for both High School and Beyond and the National Education Longitudinal Study of 1988 was built using parental education level, parental occupation, family income, and household items. Students were placed in quartiles based on their standardized composite score. By definition, one-quarter of each cohort will reside in the bottom SES quartile, even if education levels, income, and the number of persons in more prestigious occupations increase. The terms high, middle, and low SES refer to the upper, middle two, and lower quartiles of the weighted SES composite index distribution.

**Specific learning disabilities:** A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not apply to children who have learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage.

**Speech or language impairments:** A communication disorder such as stuttering, impaired articulation, a language impairment, or a voice impairment that adversely affects a child's educational performance.

**Student controlled:** Tasks where students had control over the procedures used to solve a problem.

**Student services:** Funds expended for admissions, registrar activities, and activities whose primary purpose is to contribute to students' emotional and physical well-being and to their intellectual, cultural, and social development outside the context of the formal instructional program.

**Stopout:** (See Dropout.)

**Subbaccalaureate degree:** Award granted for the successful completion of studies at either 2-year or less-than-2-year institutions. Subbaccalaureate degrees typically include associate's degrees and certificates.

**Support services expenditures (elementary/secondary):** Current expenditures for activities which support instruction. These services include school building operation and maintenance, school administration, student support services, student transportation, instructional staff support, school district administration, business services, research, testing, and data processing.

**Support Services:** The sum of current fund expenditures on student services (e.g., guidance, health), instructional services (e.g., curriculum development, staff training), general and school administration, operation and maintenance, transportation, food services, and enterprise operations.

## T

**Task controlled:** Tasks where students were asked only to follow the procedures demonstrated by their teacher.

**Tax expenditures:** Losses of tax revenue attributable to provisions of the federal income tax laws that allow a special exclusion, exemption, or deduction from gross income or provide a special credit, preferential rate of tax, or a deferral of tax liability affecting individual or corporate income tax liabilities.

# Glossary

**Technical/professional fields:** A group of occupationally oriented fields of study, other than engineering and computer science, that includes agriculture and agricultural sciences, architecture, business and management, communications, education, health sciences, home economics, law, library and archival sciences, military sciences, parks and recreation, protective services, and public affairs.

**Tenure-track faculty:** Faculty members who were either tenured or on the tenure track at their institution.

**Total expenditures per pupil in average daily attendance:** Includes all expenditures allocable to per pupil costs divided by average daily attendance. These allocable expenditures include current expenditures for regular school programs, interest on school debt, and capital outlay. Beginning in 1980–81, expenditures for state administration are excluded and expenditures for other programs (summer schools, community colleges, and private schools) are included.

**Tuition and fees:** A payment or charge for instruction or compensation for services, privileges, or the use of equipment, books, or other goods.

**Type of postsecondary education degree-granting institutions:**

4-year institution: An institution legally authorized to offer and offering at least a 4-year program of college-level studies wholly or principally creditable toward a baccalaureate degree. In some tables a further division between universities and other 4-year institutions is made. A "university" is a postsecondary institution that typically comprises one or more graduate professional schools. (See University.)

2-year institution: An institution legally authorized to offer and offering at least a 2-year program of college-level studies that terminates in an associate's degree or is principally creditable toward a baccalaureate degree.

## U

**Undergraduate students:** Students registered at a postsecondary education institution in a program leading to a baccalaureate degree or other formal award below the baccalaureate such as an associate degree.

**Unemployed:** Civilians who had no employment but were available for work and (1) had engaged in any specific job-seeking activity within the past 4 weeks, (2) were waiting to be called back to a job from which they had been laid off, or (3) were waiting to report to a new wage or salary job within 30 days.

**University:** A postsecondary education institution that consists of a liberal arts college, a diverse graduate program, and usually two or more professional schools or faculties, and is empowered to confer degrees in various fields of study.

## Y

**Year-round worker:** One who was employed at least 50 weeks during the previous calendar year, including paid leave for illness, vacation, or other reasons.

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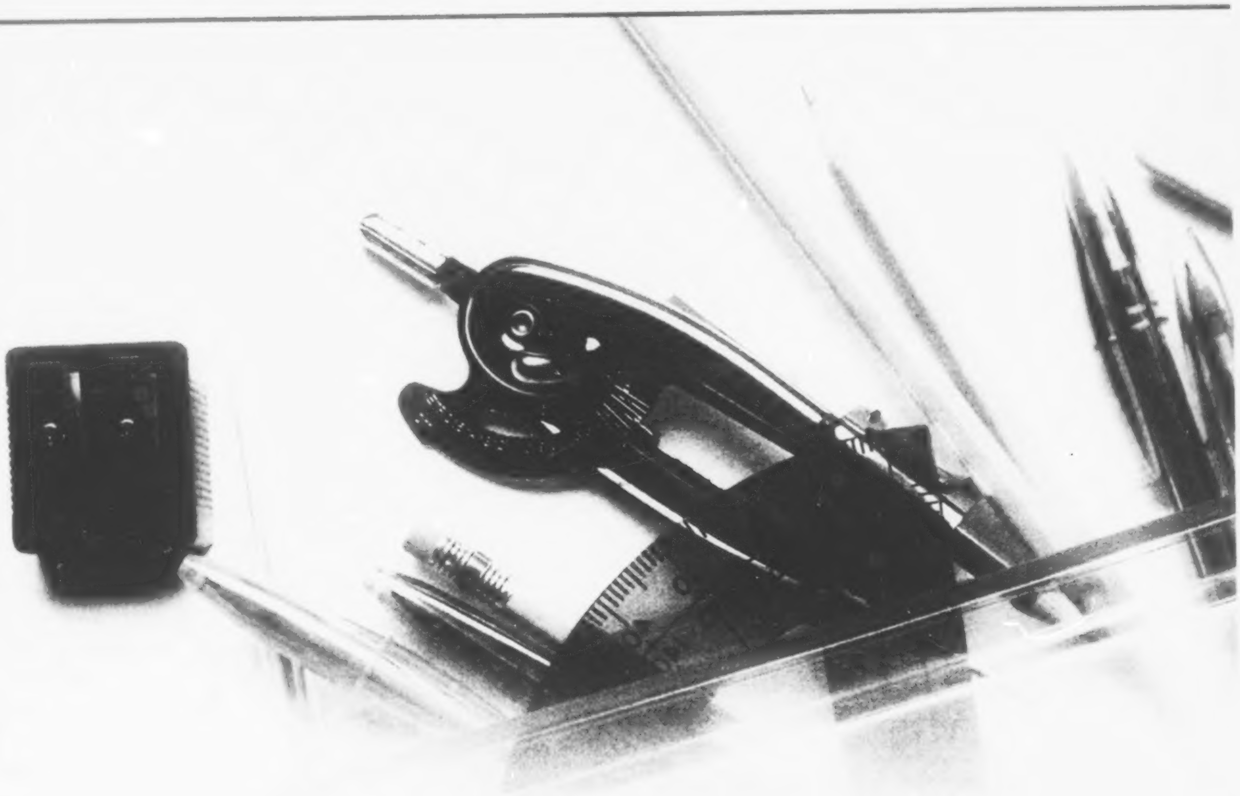

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